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ALL BRANCHES

Branch	Key Threat	Initiative	Project / Actitivity Name	Status / Date c = complete ~ = underway x = not yet started	Type of Measure Reasearch / Monitoring (R&M) Management (M) Engagement (E)	Branch Lead	Other implicated Branches and/or agencies
Science	Prey Availability	RKW AP	Undertake an annual census to monitor and assess Resident Killer Whale population dynamics (multi-species ship surveys and dedicated vessel surveys)	~	R&M	Sheila Thornton	Policy Branch
Science	Prey Availability	WSR	Estimate the carrying capacity of RKW habitat (pop. Modeling)	~	R&M	Sheila Thornton	EMB-SARA
Science	Prey Availability	WSR	Identify features that define"quality" prey for RKW foraging area	~	R&M	Sheila Thornton	FM
Science	Prey Availability	WSR	Assess the quality of identified prey species on an annual basis	~	R&M	Sheila Thornton	FM
Science	Prey Availability	WSR	Identify year round RKW distribution and diet using acoustic monitoring and dedicated vessel surveys	~	R&M	Sheila Thornton	NOAA MMRP?
Science	Prey Availability	OPP-MEQ	Further identify RKW prey preferences (spcecies/size/sex/stock)	~	R&M	Sheila Thornton	OPP-MEQ (Elly Chmelnitsky)
Science	Prey Availability	OPP-MEQ	Undertake a caTransport Canadah per unit effort assessment of RKW foraging effort and success rate to provide information on foraging areas and inform management decisions	~	R&M	Sheila Thornton	OPP-MEQ (Elly Chmelnitsky)
Science	Prey Availability	RKW AP	Continue to investigate the role of abundance of Chinook and other important salmonid prey species in the population dynamics of the Northern and Southern RKW populations	~	R&M	Sheila Thornton	FM
Science	Prey Availability	RKW AP	Assess seasonal and inter-annual changes in body condition and growth of RKW and refine the relationship between prey abundance to inform managmetn action in support of Prey Availability	~	R&M	Sheila Thornton	FM
Science	Prey Availability	RKW AP	Assess the potential impact of prey competition between SRKW, NRKW and other salmonid predators	~	R&M	Sheila Thornton	FM
Science	Prey Availability	RKW AP	Continue to monitor abundance, distribution and age specific composition of Chinook and other important salmonid prey species	~	R&M	Sheila Thornton	FM
Science	Prey Availability	RKW AP	Continue to assess the potential impact of salmon enhancement and aquaculture operations on RKW both directly and through effects on wild salmon populations, and develop actions to mitigate such effec should impacts be detected.		R&M	Sean MacConnachie	SEP FM Policy Branch
Science	Prey Availability	RKW AP	Understake behavioural studies of RKW in winter months	~	R&M	Sheila Thornton	
Science	Prey Availability	RKW AP	Continue to undertake research activities to identify areas of habitat necessary for the survival and recovery of Resident Killer Whales.		R&M	Sheila Thornton	EMB-SARA?
Science	Physical / Acoustic Disturbance	RKW AP	Assess cumulative effects of potential anthropogenic impacts on RKW using an appropriate impact assessment framework for aquaic species		M		
Science	Physical / Acoustic Disturbance	RKW AP	Analyse new acoustic and sightings data to identify additional areas of habitat necerssary for the survival and recoveryh of RKW		R&M		
Science	Physical / Acoustic Disturbance	RKW AP	Review and assess project impacts on RKW and their habitat and provide advice on avoidance and mitigation measures as required (FPP Review)		R&M	Sean MacConnachie	FPP
Science	Physical / Acoustic Disturbance	RKW AP	Expand transboundary coverage of calibrated hydrophones to quantify ocean noise budget throughout RKW range giving priority to improving and utilizing existing hydrophone networks	~	R&M	Sheila Thornton	FM - Paul Cottrell
Science	Physical / Acoustic Disturbance	RKW AP	Standardize protocols and methodologies for data analysis data presentation and archiving of acoustic information obtained from hydrophones in the RWK range		R&M	Sheila Thornton	FM - Paul Cottrell
Science	Physical / Acoustic Disturbance	RKW AP	Investigate RKW use of marine Navy ranges, geographically and temporally in order to help inform decisions around naval exercise planning		R&M	Sheila Thornton	DND
Science	Physical / Acoustic Disturbance	RKW AP	Undertake systematic monitoring of ambient noise records for non-vessel related acoustic events that may cause harm to RKW		R&M	Sheila Thornton	FM
Science	Physical / Acoustic Disturbance	RKW AP	Compile metadata on acoustic recordings from existing archives and current available sources (e.g. Navy, government agencies, individuals, consultants); identify format, calibration, temporal and spatial distribution, data gaps, and data collection protocols)		R&M	Sheila Thornton	FM - MMR
Science	Physical / Acoustic Disturbance	RKW AP	Understake behavioural studies of RKW in winter months	~	R&M	Sheila Thornton	
Science	Physical / Acoustic Disturbance	RKW AP	Utilize D-tag data to create a 3D model of the RKW immediate acoustic environment)	~	R&M	Sheila Thornton	SMRU Consulting
Science	Physical / Acoustic Disturbance	RKW AP	Develop an acoustic model that incorporates effects of increasing ambient noise levels on communication signals of RKW		R&M	Sheila Thornton	
Science	Physical / Acoustic Disturbance	RKW AP	Continue and expand existing behavioural monitoring programs involveing vessel/whale interactions and increase support for data analysis and publication		R&M	Sheila Thornton	
Science	Physical / Acoustic Disturbance	RKW AP	Increase transboundary communciation of research methods and objectives to address disturbances issues with counterpart agencies and the US		R&M	Sheila Thornton	NOAA MMRP FPP
Science	Physical / Acoustic Disturbance	OPP	Increase interagency communication and coordination to ensure that new activities, projects and developments that may impact RKW are identified and appropriate mitigation measures are developed and implemented (e.g. CEAA, FPP)	~	M	FPP Contact	FPP, EMB, FM Transport Canada, ECCC, DND, CEAA,

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Science	Physical / Acoustic Disturbance	OPP	Develop a means to assess individual ship noise and determine response strategies as necessary	~	M	Sean MacConnachie	ECHO
Science	Physical / Acoustic Disturbance	RKW AP	Continue to undertake research activities to identify areas of habitat necessary for the survival and recovery of Resident Killer Whales.		R&M	Sheila Thornton	EMB-SARA?
Science	Physical / Acoustic Disturbance	RKW AP	Research the effects of other vessel-based impacts (e.g. fish finders, air quality issues related to engine exhaust, disposal of waste and bilge water).	~	R&M	Sheila Thornton	ECCC
Science	Physical / Acoustic Disturbance	RKW AP	Model existing acoustic data to estimate efficacy of potential noise reduction measures such as alteration of shipping lanes, varying ship speed, and coordinating vessel transits by convoy. Validate acoustic modelling efforts by deploying autonomous recorders and comparing measurements with model outputs. (Table 4)		R&M	Sheila Thornton	Transport Canada led
Science	Physical / Acoustic Disturbance	RKW AP	Quantify the impacts of vessel-related physical disturbance and anthropogenic noise and echolocation masking on SRKW foraging success, and compare to areas where mitigation measures have been implemented to assess the effectiveness of those measures and support their adaptation as needed. (Table 4)		R&M	Sheila Thornton	Transport Canada led
Science	Contaminants	RKW AP	Research the effects of other vessel-based impacts (e.g. fish finders, air quality issues related to engine exhaust, disposal of waste and bilge water).	~	R&M	Sheila Thornton	ECCC
Science	Contaminants	RKW AP	Develop, evaluate, and apply new tools to assess the effects of contamination and pollution on the health of free-ranging Resident Killer Whales.		M	Sheila Thornton	ECCC FM-SARA
Science	Contaminants	RKW AP	Quantify the current levels of contaminant concentrations in Resident Killer Whale prey and refine the analysis of contaminant intake by Resident Killer Whales using current information on their feeding ecology.	~	R&M	Sheila Thornton	ECCC - Contaminants WG
Science	Contaminants	RKW AP	Evaluate the risks of bioaccumulation related to mercury (Hg) contamination in Resident Killer Whale food webs.	~	R&M	Sheila Thornton	ECCC - Contaminants WG
Science	Contaminants	RKW AP	Support new, proposed, or existing bans on the use of pesticides for cosmetic purposes, and re-establish a comprehensive inventory of pesticide sales and use in British Columbia.	~	R&M	Sheila Thornton	ECCC - Contaminants WG
Science	Contaminants	RKW AP	Incorporate knowledge of Resident Killer Whale distribution, foraging behavior and contaminant bioaccumulation into CEPA technical reviews on chemicals of concern.	~	R&M	Sheila Thornton	ECCC - Contaminants WG
Science	Contaminants	RKW AP	Establish a PBDE toxicological threshold level in marine mammals to support regulations and the prioritization of targeted remediation efforts.	~	R&M	Sheila Thornton	ECCC - Contaminants WG
Science	Contaminants	RKW AP	Accelerate the rate of compliance with the Canadian Wastewater System Effluent Regulation (2012) in wastewater treatment facilities that border the Salish Sea (Table 5)	~	R&M	Sheila Thornton	
FM	Prey Availability	RKW AP	Examine indicators of prey aggregation to identify potential RKW foraging areas (e.g. salmon fishing effort, caTransport Canadah success)	~	R&M M	Jeff Grout	Science Branch
FM	Prey Availability	RKW AP	Take into account both the seasonal (acute) as well as the cumulative (chronic) effects of poor returns for Chinook and other important prey species on RKW when managing fisheries	~	M R&M	Jeff Grout	Science Branch
FM	Prey Availability	RKW AP	Investigate the benefits of strategic fishery planning approaches and management actions to reduce RKW prey competition in specific feeding areas (e.g. modeling, retention limits, fishery area boundary adjustment or closures	~	M	Neil Davis	Science Branch
FM	Prey Availability	OPP-MEQ	Enable Management Strategy (EMS): Evaluation for Chinook Fisheries	~	M E	Jennifer Nener	OPP-MEQ (Elly Chmelnitsky)
FM	Prey Availability	RKW AP	Develop and implement reporting systems for the fishing sectors that improve salmonid caTransport Canadah, release, and retention data to more accurately portray potential fishery impacts	x	M	Neil Davis	Science Branch
FM	Prey Availability	RKW AP	Investigate the benefits of management actions (e.g. protected areas, fishery area boudnary adjustments or closures) to protect important foraging and beach rubbing lcoations such as Robson Bright and other identifed area, and implement where appropriate.	x	M	Neil Davis	Science Branch
FM	Prey Availability	RKW AP	Incorporate ATK on the behavior and distribution of RKW and their prey into measures for the recovery of the species	~	R&M	Karen Leslie	Policy Branch?
FM	Prey Availability	RKW AP	Continue to implement and support salmon recovery plans (e.g. Canada's Policy for Conservation of Wild Pacific Salmon, Puget Sound Chinook Recovery Plan)	~	M	Neil Davis	Policy Branch?
FM	Prey Availability	RKW AP	Identify and account for the likelihood that changes in the relative strength of major salmon stocks may cause corresponding shifts in the geographic location of critical habitat for Resident Killer Whales.		M	Jeff Grout	Resource Management

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FM	Prey Availability	RKW AP	Use historical fishing records to identify potential Resident Killer Whale feeding areas.		M	Lisa Jones	RM-SARA
FM	Prey Availability	RKW AP	Analyze historical data to identify environmental correlates with Chinook abundance and Resident Killer Whale mortality trends.		M	Lisa Jones	RM-SARA
FM	Prey Availability	RKW AP	Develop a means of differentiating nutritional vs. disturbance-induced stress (via hormone response and other methods).	~	M	Lisa Jones	RM-SARA
FM	Prey Availability	OPP	Improve public awareness of recovery activities for Resident Killer Whales through Parks Canada Agency's educational programs (e.g. the BC Ferries Coastal Naturalist Program).		E	Paul Cottrell	Parks Canada Agency
FM	Prey Availability	RKW AP	Implement fisheries management measures that will foster healthy and abundant populations of herring and sand lance to support greater availability of Chinook		M	Jeff Grout	Science Branch
FM	Physical / Acoustic Disturbance	OPP-MEQ	Develop and recommend implementation of best practices , guidelines, regulations, or other measures to minimize or eliminate physical and acoustic disturbance to RKW i.e. Marine Mammal Response Network	~	M	Paul Cottrell	OPP-MEQ (Elly Chmelnitsky)
FM	Physical / Acoustic Disturbance	RKW AP	Institute a communications plan around the Marine Mammal Regulations and ensure the message in Transboundary.	~	M	Paul Cottrell	Transport Canada
FM	Physical / Acoustic Disturbance	OPP	Link hydrophone-detected noise events with vessel presence using the Automatic Identification System (AIS) for real time detection of acoustic disturbance in RKW critical habitat and implement a response mechanism to mitigate potential impacts i.e. Whale Tracking Network	~	M	Paul Cottrell	ECHO
FM	Physical / Acoustic Disturbance	OPP	Maintain and improve the existing 24 hour hotline (BCMMRN/ORR) for acoustic incidents as a mechanism for timely response	~	M E	Paul Cottrell	
FM	Physical / Acoustic Disturbance	OPP	Expand the Be Whale Wise flag program to notify other mariners when whales have been observed in order to reduce risk of collision and acoustic disturbance.	~	M E	Paul Cottrell	MMRP
FM	Physical / Acoustic Disturbance	OPP	Improve public awareness of recovery activities for Resident Killer Whales through Parks Canada Agency's educational programs (e.g. the BC Ferries Coastal Naturalist Program).		E	Paul Cottrell	Parks Canada Agency
FM	Physical & Acoustic Disturbance	RKW AP	Investigate the benefits of management actions (e.g. protected areas, fishery area boudnary adjustments or closures) to protect important foraging and beach rubbing lcoations such as Robson Bright and other identifed area, and implement where appropriate.	x	M	Neil Davis	Science Branch
FM	Physical & Acoustic Disturbance	RKW AP	Improve boater education and tourism programs using the latest marine mammal regulations and guidelines (e.g. boater courses, marine safety courses, fishing licences, vessel registration and licencing courses)		M E	Paul Cottrell	Communications Branch
FM	Contaminants	RKW AP	Investigate the benefits of management actions (e.g. protected areas, fishery area boudnary adjustments or closures) to protect important foraging and beach rubbing lcoations such as Robson Bright and other identifed area, and implement where appropriate.	x	M	Neil Davis	Science Branch
EMB	Prey Availability	RKW AP	Support RKW recovery during the planning, development, and implementation of marine proteced areas by contributing to prey availability and threat abatement			Oceans contact?	
EMB	Prey Availability	RKW AP	Identify and monitor natural and anthropogenic factors affecting RKW prey over the long term (e.g. climate change, Pacific Decadal Oscillaiton, El Nino)		R&M	EMB SARA	Oceans
EMB	Prey Availability	RKW AP	Form a transboundary working group of representatives from DFO, NOAA, as well as other technical eperts to ensure that RKW needs are considered in the management of fisheries (e.g. Canada's Policy for the Conservation of Wild Salmon, Pacific Salmon Treaty)	??	M	Sarah Murdoch	Policy Branch NOAA
EMB	Prey Availability	RKW AP	Protect and Preserve the freshwater habitat of important RKW prey stocsk		M	Karen Leslie	FM
EMB	Prey Availability	RKW AP	Refine understanding of the functions, features and attributes of Resident Killer Whale habitat and identify what may constitute critical habitat destruction.	~	M	Karen Leslie	RM-SARA
EMB	Physical & Acoustic Disturbance	RKW AP	Support RKW recovery during the planning, development, and implementation of marine proteced areas by contributing to prey availability and threat abatement	~	M	Oceans contact?	SARA teams Science
EMB	Physical & Acoustic Disturbance	RKW AP	Review operational impacts of existing activities, projects and developments that may have acute or cumulative impact on RKW and work with stakeholders to deveop and apply appropriate mitigation measures		M E	FPP lead?	SARA teams
EMB	Physical & Acoustic Disturbance	OPP	Encourage the development and use of methodologies that mitigate acoustic impacts (e.g. bubble curtains, ship quieting technologies)		M	Karen Leslie	Transport Canada
EMB	Physical & Acoustic Disturbance	OPP	Review and improve 1) thresholds for disturbance and inury, and 2) measures to mitigate marine mammal impacts from acute noise (e.g. seismic surveys, sonar use, pile driving and at-sea detonation); and implement through inclusion in Standards and Statements of practice (e.g. Naval Orders, Statement of Canadian Practice with respect to the Mitigation of Seismic Sound in the Marine Environment)		M	FPP lead?	OPP-MEQ FPP
EMB	Physical & Acoustic Disturbance	OPP	Develp a communications strategy to inform foreign vessel operators of the Canadian legislation protecting marine mammals and Canadian acoustic mitigation protocols		M E	Transport Canada	Transport Canada Communications Branch
EMB	Physical & Acoustic Disturbance	OPP	Investigate area-specific shipping and boating guidelines and/or regulations (e.g. speed restrictions, vessel traffic routes and scheduling) that reduce acoustic impact as well as risk of collision in RKW habitat	~	M	Transport Canada	Transport Canada
EMB	Physical & Acoustic Disturbance	RKWP AP	Refine understanding of the functions, features and attributes of Resident Killer Whale habitat and identify what may constitute critical habitat destruction.	~	M	Karen Leslie	RM-SARA

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EMB	Physical & Acoustic Disturbance	RKWP AP	Continue efforts outlined in Broad Strategy 3 to ensure disturbance from human activities does not prevent access of Resident Killer Whales to their critical habitat.		M	Karen Leslie	RM-SARA
EMB	Physical & Acoustic Disturbance	RKWP AP	Continue dialogue with the NOAA to encourage transboundary consistency of Southern Resident Killer Whale critical habitat protection.		M	Karen Leslie	Transport Canada led Transboundary WG?
EMB	Contaminants	OPP-MEQ	Conduct research in support of evaluating risks associated with disposal at sea operations in coastal waters (e.g. with a focus on emerging concerns such as PBDEs).	~	R&M	Elly Chmelnitsky	Science Branch
EMB	Contaminants	OPP	Quantify the background levels of natural and anthropogenic hydrocarbons to provide a baseline for assessing spill impacts in Resident Killer Whale habitat.		R&M	Eric Chiang	Science Branch CCG-RRP
EMB	Contaminants	RKW AP	Identify and monitor contaminants of concern (e.g. flame retardants, pharmaceuticals and personal care products, PBTs, hydrocarbons), and conduct a risk-based assessment of different chemicals of concern in Resident Killer Whales, their prey, and their habitat.		R&M	Sheila Thornton	FM NCAG
EMB	Contaminants	RKW AP	Evaluate contaminant concentration trends in Resident Killer Whales, based on both published and new measurements of different contaminants.		R&M	Sheila Thornton	FM
EMB	Contaminants	RKW AP	Develop a monitoring program for pathogens and biological pollutants to evaluate long-term trends in Resident Killer Whales and their prey.		R&M	Sheila Thornton	FM
EMB	Contaminants	RKW AP	Undertake a workshop to identify source of persistent bioaccumulative contaminants presenting a risk to Resident Killer Whales.		R&M	Sheila Thornton	FM
EMB	Contaminants	RKW AP	Undertake a workshop to identify source of biological pollutants presenting a risk to Resident Killer Whales.		R&M	Sheila Thornton	FM
EMB	Contaminants	RKW AP	Collate information on remediation efforts for land-based PCBs.		R&M	Sheila Thornton	FM
EMB	Contaminants	RKW AP	Work with the Federal Contaminated Sites Action Plan (FCSAP) to evaluate the potential contribution of persistent environmental contaminants to the contamination of Resident Killer Whale habitat.		R&M	Sheila Thornton	FM
EMB	Contaminants	RKW AP	Pursue an interagency contaminants working group to identify roles and responsibilities with respect to potential impacts of contaminants on Resident Killer Whales and their environment.		R&M E	Sheila Thornton	FM
EMB	Contaminants	RKW AP	Incorporate knowledge of distribution, foraging behavior and contaminant bioaccumulation in Resident Killer Whales into pesticide and chemical regulation development and implementation overseen by provincial agencies, Health Canada's PMRA (Pest Management Regulatory Agency), and Environment Canada's Chemical Management Plan (CMP).		R&M E	Karen Leslie	ECCC led contaminants WG? SARA team
EMB	Contaminants	RKW AP	Determine the efficacy of the new regulations for PBDEs under the Canadian Environmental Protection Act (CEPA) by monitoring trends in indicator species in Resident Killer Whale habitat, and develop additional source control strategies if warranted.		R&M E	Karen Leslie	ECCC led contaminants WG? SARA team
EMB	Contaminants	RKW AP	Identify and support programs that identify and mitigate small scale and/or chronic contaminant spills and leaks.		R&M E	Karen Leslie	ECCC led contaminants WG? SARA team
EMB	Contaminants	RKW AP	Reduce the risk of lifetime contaminant exposure in Resident Killer Whales by incorporating knowledge of distribution, foraging behavior and their food web into assessment and remediation plans for contaminated sites.		R&M E	Karen Leslie	ECCC led contaminants WG? SARA team
EMB	Contaminants	RKW AP	Work with other government departments, non-governmental organizations, and industry to promote best practices, green design, mitigation protocols and outreach efforts for the protection of Resident Killer Whales and their habitat from urban pollution (e.g. sewage treatment, source control, combined sewer overflows, runoff).		R&M E	Karen Leslie	ECCC led contaminants WG? SARA team
EMB	Contaminants	RKW AP	Work with individuals, industries, agricultural operations, and other sectors in order to reduce the release of agricultural chemicals of concern into the habitat of Resident Killer Whales and their prey.		R&M E	Karen Leslie	ECCC led contaminants WG? SARA team
EMB	Contaminants	RKW AP	Ensure that the protection of Resident Killer Whales and their habitat is included as a high priority in spill response and monitoring protocols within the Canadian Coast Guard's Incident Command Structure.		R&M E	Karen Leslie	ECCC led contaminants WG? SARA team CCG
EMB	Contaminants	RKW AP	Prepare for oil or chemical spills to minimize impacts to Resident Killer Whales through the development of a spill response plan, including deterrence methods, training, drills and equipment.		M R&M	Karen Leslie	ECCC led contaminants WG? SARA team
EMB	Contaminants	RKW AP	Review and, if appropriate, recommend refinement of policies and best management practices for ocean dredging and disposal at sea.		M R&M	Karen Leslie	ECCC led contaminants WG? SARA team
EMB	Contaminants	RKW AP	Refine and expand existing monitoring programs of municipal and industrial waste to minimize Resident Killer Whale exposure to legacy and emergent pollutants.		M R&M	Karen Leslie	ECCC led contaminants WG? SARA team
EMB	Contaminants	RKW AP	Reduce the release of biological pollutants into the habitat of Resident Kilier Whales and their prey by working with municipal, provincial and federal agencies tasked with domestic, agricultural and industrial discharges (including ballast water).		M R&M	Karen Leslie	ECCC led contaminants WG? SARA team

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EMB	Contaminants	RKW AP	Mitigate the release of biological pollutants into the habitat of Resident Killer Whales and their prey by working with individuals, industries, agricultural operations, and other source sectors to develop or improve protocols and guidance.		M R&M	Karen Leslie	ECCC led contaminants WG? SARA team
C&P	Prey Availability						
C&P	Prey Availability						
C&P	Physical / Acoustic Disturbance	RKW AP	Prioritize on-water enformcement efforts for compliance with legal protections for RKW and their habitat	~	M	Jeanette LaPointe	Fisheries Management - MMRP
C&P	Physical / Acoustic Disturbance						
C&P	Contaminants						
C&P	Contaminants						

s.21(1)(a)

s.21(1)(b)

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Mbarushimana, Jenny

From: Shaikh, Sharlene
Sent: July-16-18 10:30 AM
To: Brekke, Heather
Subject: RE: Revision #4 ROCS Update - Week of July 09, 2018

Thanks for sharing!

From: Brekke, Heather
Sent: July-16-18 10:29 AM
To: Govender, Rhona; Jones, Lisa Ann; Lee, Tatiana; McMillan, Christie; Shaikh, Sharlene
Subject: FW: Revision #4 ROCS Update - Week of July 09, 2018

Hi all,

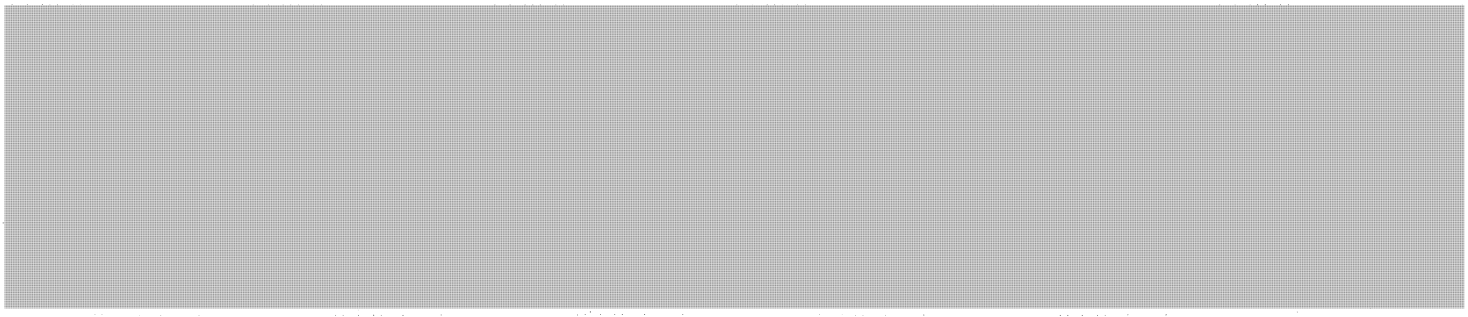
Moving forward, I will be sending out the weekly ROCS updates for information only. ROCS issues provide the hot issues the RDG and Minister are briefed on within the region. These come out Thursday morning. There was a request at the all staff last week to improve communication of the hot issues, and this is one way everyone can see what the key issues the region is facing are.

Please let me know if you have any questions.

Cheers
Heather

From: Chin, Jena
Sent: July-13-18 8:40 AM
To: Thomson, Andrew
Cc: Bate, Angela
Subject: Revision #4 ROCS Update - Week of July 09, 2018

Good morning Andy,



Cheers,
Jena

Amended Recovery Strategy for Resident Killer Whales
The external review of proposed Critical Habitat amendments in the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada concluded on July 11th. Ecojustice submitted comments,

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including the concern that adding Critical Habitat through the process of amending the Recovery Strategy may be slower than implementing an Emergency Protection Order. DFO is planning to expedite the protection process by implementing the Critical Habitat order (through regulation) concurrent with the approval of the Amended Recovery Strategy by December 2018, which would largely address this concern. The review also prompted extensive negative reaction from the recreational fishing community. 671 comments were received from the external review, primarily from recreational fishers, who are concerned about their ability to participate in consultations during the summer time and very anxious about the potential of further fishing closures on the west coast of Vancouver Island that may result from the addition of new areas of Critical Habitat. There have also been a number of letters to the Minster and multiple media stories have reported on the issue. Regional staff have attended numerous meetings with recreational fishers, First Nations, local government officials, and others to address questions and outline the review process. Staff are also determining whether the start date for the next consultation phase can be moved back to September to accommodate the busy summer season for the recreational fishery without impacting the timeline for completion of the amended Recovery Strategy and implementation of any Critical Habitat protections by December.

Consultations on Late Run/Cultus Lake Sockeye Management Approach:

DFO very recently (after all consultations for the 2018 Integrated Fisheries Management Plan were completed) received new information regarding survival of Cultus Lake sockeye, which are a component of the Late Run management unit of Fraser River sockeye. Cultus sockeye were designated by Committee on Status of Endangered Wildlife in Canada (COSEWIC) as "endangered" in 2002 and 2017, but not listed under the *Species at Risk Act*. Fraser sockeye experience a large return of Late Run sockeye every 4th year, with 2018 anticipated to bring about 7 million at the median level of the forecast. This new information shows that there has been extremely limited survival of juvenile salmon in Cultus Lake and extremely low natural production, with the population now being reliant upon enhancement – this has significant implications for the overall Late Run management approach. In this regard, the Minister recently signed a Decision Note (2018-502-00091) supporting that regional staff undertake consultations on a range of options – these consultations are likely to take place the week of July 23rd

Communications is being kept informed and will be ready to respond.

Viral Hemorrhagic Septicemia Virus (VHSv) Discovered in West Coast Vancouver Island Herring Stock Mortality Event

On June 24, 2018 viral hemorrhagic septicemia virus (VHSv) was discovered in Pacific Herring sampled from a die-off near Hot Springs Cove, near the village of Ahousaht, in the asserted traditional territory of the Ahousaht First Nation. The samples were submitted by Uu-a-thluk Fisheries/Nuu-chah-nulth Tribal Council staff who had observed the moribund fish floating near the water surface. 22/26 fish were diagnosed as having the virus and 21 fish were also diagnosed to have sea lice. The diagnostic lab at Pacific Biological Station concluded that herring in Hot Springs Cove most likely succumbed to virus outbreak, which is a common occurrence among herring on the coast of BC during the spring months. the science in BC shows that this virus is naturally occurring and has been detected for 20 years with many occurrences of mass mortalities among populations of Pacific Herring and sardine. Detections among farmed Atlantic salmon and farmed Chinook salmon occur after exposure to infected herring. The west coast Vancouver Island herring stock has been closed to commercial fisheries since 2006 because the stock has been in a low productivity, low biomass state for several years. As a result, there is high interest in this mortality event and its cause among members of Nuu-chah-nulth communities and the broader public. The results of the diagnostic testing were shared with from the Nuu-chah-nulth Tribal Council on July 11th, 2018.

Esketemc First Nation Protest Fishery

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[redacted] One media story framed around conservation and the interest of the First Nation in engaging with the department to share information and be part of decision making was released on July 11 (https://www.wltribune.com/news/first-nations-chief-takes-to-fraser-river-in-dfo-protest/). It is unclear if there will be further media stories on this protest.

Cheers,
Jena Chin
Integrated Aboriginal Programs Coordinator
Aboriginal Programs Division
Jena.Chin@dfo-mpo.gc.ca
Tel: 604.666.2410

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Mbarushimana, Jenny

From: Malikian, Janine
Sent: July-16-18 11:46 AM
To: Brekke, Heather
Subject: RE: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

Super, thanks Heather!

Janine

From: Brekke, Heather
Sent: July-16-18 10:54 AM
To: Malikian, Janine
Cc: McMillan, Christie; Fershau, Jonathan; Jones, Lisa Ann
Subject: RE: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

Hi Janine,

I just got off the phone with Karen Leslie, who was on the MinO call at 10am. They are also hoping for a final/revised version of that FAQ document asap. Can you please send that along, and CC me? This is the same document I last emailed you about, where Neil was hoping to post a repackaged version to the DFO website asap as well.

A summary of the responses from the 30-day external review is below.

- The Department conducted a 30-day online external review on the draft Amended Recovery Strategy from June 12 – July 11, 2018.
- ~690 responses were received from individuals and organizations (669 online submissions / 18 written submissions) . Majority of the responses received were from the recreational fishing sector or small business owners / Chambers of Commerce members located on the West Coast of Vancouver Island. Many of these responses were received followed one of two an online petition forms that was generated. These responses highlighted significant concern on the timing of the external review process (occurring during peak fishing season); perceived lack of meaningful consultation, confusion regarding what CH designation is and concern this will result in immediate fishing closures (and subsequent perceived adverse impacts to their livelihood); and, criticism of the science advice used to identify the two additional proposed CH areas. All feedback from this regional external review is being considered but is not expected to result in substantive changes to the document.
    - Sample of "Supportive" comments (~20% of respondents)
        - Sub #345: With only 75 animals left, and a 30 year low, we need to work fast to protect their habitat and see more critical habitat protected for both Northern and Southern resident killer whales, additional critical habitat off southwestern Vancouver Island includes the Canadian portions of Swiftsure Bank and other shallow banks including La Pérouse Bank.
        - Sub #420: Since all species are interconnected I am sure that saving the Southern Resident Killer Whales has impacts on the ecosystem that ultimately affects humans. It would also help Canada's reputation as as political leader.
        - Sub #442: Move forward with these actions quickly as the remaining numbers are already unlikely to sustain this species going forward.
        - Sub #515 Do whatever it takes to save these unique iconic whales.
    - Sample of "opposed comments (~60% of respondents)

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- Sub #327: The Amended Strategy will have far reaching impacts culturally and economically. While the whales need habitat and protection, the amended strategy will create hardship for many on the coast and do little to help these whales.
- Sub #360: Based on local reports from whale watching guides, recreational/commercial fishermen, and my own observations, the offshore waters between Sooke and Ucluelet are not frequented by the SRKW; these observations have been made over a twenty year time-frame. In my 10 years of fishing the offshore waters from Bamfield to Tofino, I have never encountered a killer whale. These anecdotal reports should be strongly considered in the management of the SRKW recovery.
- Sub #364: We have not been directly consulted. The decision to close sports fishing at Swiftsure Bank will absolutely without question devastate our community. We demand the proper consultation at an appropriate time of year.
- Sub# 386: I think this is a terrible plan. Please consider a better method. Sport fishing for chinook salmon in these waters surely has VERY LITTLE impact on Northern and Southern Resident Killer Whales, and there is no science proving shutting down sportfishing is going to make any difference to either Resident Orca population. I have heard of another technique (rather than a full area closure which would have profound impacts on so many levels locally) whereas there must be no fishing within 400meters of any Resident Killer Whales. This ensures sportfishermen (and commercial fisheries) aren't interrupting with Orca feeding abilities and habits. Please reconsider!

- Several meetings have been held as requested to provide information and clarification on the proposed revisions to the recovery strategy: SFAB, Pacheedaht and Ditidaht, West Coast Aquatic (included members of local and regional government (including Gord Johns, Courtenay-Alberni MP), Uu-a-thluk Program of the Nuu-chah-nulth Tribal Council, as well as commercial and recreational fishers).
- 3 letters were sent to Ministers, one each from the Sport Fishing Advisory Board (Gerry Kristianson), District of Ucluelet and from a group of representatives from WCA Governance Board, West Coast Fishing Guides Association, Alberni Sport Fish Advisory Committee, Area G Trollers Association, BC Commercial Fishing Caucus expressing these concerns. 3 other letters were received, including from Ecojustice (urging for designation and protection to occur by 2018), VFPA (general support for amendment; requesting clarification of thresholds and values to identify Critical Habitat), and Chamber of Shipping (general support for amendment; requesting clarification of thresholds and values to identify Critical Habitat) and 4 letters were received from Indigenous groups generally expressing concern over implication to Treaty Fishing Rights and perceived lack of meaningful consultation. Responses back to these letters are being generated.

Cheers
Lisa

From: Fershau, Jonathan
Sent: July-16-18 9:57 AM
To: Brekke, Heather
Cc: Jones, Lisa Ann; McMillan, Christie
Subject: RE: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

I know you are swamped and perhaps on this call. I can do this if you'd like.
jf

From: Malikian, Janine
Sent: July-16-18 9:54 AM
To: Brekke, Heather
Cc: Fershau, Jonathan; Jones, Lisa Ann; McMillan, Christie
Subject: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

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Hi Heather,

NHQ Comms has advised there's a briefing with MinO today about the recently closed amended RS external review, and they're asking us about the feedback received.

Would you be able to provide a quick summary? Just a couple of lines will do.

Thanks,

Janine

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Mbarushimana, Jenny

From: Jones, Lisa Ann
Sent: July-16-18 10:00 AM
To: Malikian, Janine; Brekke, Heather
Cc: Fershau, Jonathan; McMillan, Christie
Subject: RE: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

Hi Janine – we will put together a couple of lines and send up shortly
Lisa

From: Malikian, Janine
Sent: July-16-18 9:54 AM
To: Brekke, Heather
Cc: Fershau, Jonathan; Jones, Lisa Ann; McMillan, Christie
Subject: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

Hi Heather,

NHQ Comms has advised there's a briefing with MinO today about the recently closed amended RS external review, and they're asking us about the feedback received.

Would you be able to provide a quick summary? Just a couple of lines will do.

Thanks,

Janine

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Mbarushimana, Jenny

From: Malikian, Janine
Sent: July-16-18 12:40 PM
To: Brekke, Heather
Cc: McMillan, Christie; Jones, Lisa Ann
Subject: RE: For your urgent review: Media request - Consultation on amended recovery strategy for the NRKW and SRKW - CBC

Thank you all!

Janine

From: Brekke, Heather
Sent: July-16-18 12:36 PM
To: Malikian, Janine
Cc: McMillan, Christie; Jones, Lisa Ann
Subject: RE: For your urgent review: Media request - Consultation on amended recovery strategy for the NRKW and SRKW - CBC

Hi Janine,

Sorry for the delay – please see our suggested changes below in red text.

Please let me know if you have any questions or concerns.

Best
Heather (and team)

From: Malikian, Janine
Sent: July-16-18 10:53 AM
To: Brekke, Heather
Cc: Jones, Lisa Ann; McMillan, Christie
Subject: For your urgent review: Media request - Consultation on amended recovery strategy for the NRKW and SRKW - CBC
Importance: High

Hi Heather,

Another request about the external review. Used our (still in approvals) QA doc to draft answers. This is another opportunity to clarify things.

Tight turnaround, and will have to run this up to MinO as well.

Thanks,
Janine

ISSUE: CBC News Vancouver associate producer [redacted] is working on a story about the proposed additional areas along the south western coast of Vancouver Island to the Amended Recovery Strategy for Northern and Southern Resident Killer Whales.

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He has spoken to Port Renfrew Chamber of Commerce and is looking for comment from DFO on questions below.

DEADLINE: Today at 2PM PAC.

Q1: They said that they feel they haven't been sufficiently consulted on the matter. What is your comment?

A1: The external review process for the draft Amended Recovery Strategy for Resident Killer Whales in Canada was open to feedback June 12 through July 11, 2018. This 30-day external review process was intended to solicit input from anyone potentially affected by the specific changes in the contents of the document and follows national guidance for species at risk recovery document reviews. Following this external review period, the document will now be revised where required based on feedback, and posted for a 60-day online public comment period on the Species at Risk Public Registry. This public comment period is anticipated to occur in the Fall of 2018.

Q2: They said that the consultation periods are during months when fishermen are busiest, making it way harder for them to adequately consult?

A2: On May 24, 2018, the Minister of Fisheries and Oceans and the Minister of Environment and Climate Change Canada issued a news release stating that the SRKW face imminent threat to their survival and recovery, based on the results of a 2018 Imminent Threat Assessment. The timing of the external review have been expedited as a result of this finding and the Minister's commitment to the protection and recovery of SRKW; however, they have not been shortened.

Following consideration of the feedback received from the external review process (June 12-July 11, 2018), the revised Amended Recovery Strategy will be posted for a further 60-day national online public comment period on the Species at Risk Public Registry in the Fall of 2018, thus providing a second opportunity for feedback. Following this public comment period, all feedback will be considered and a Final amended Recovery Strategy will be posted as a Final document following any required revisions from this second review period.

Q3:They worry that the DFO is moving too quickly by throwing on "blanket restrictions", rather than focused restrictions on areas of crucial habitat. What's your comment on that?

A3: Legal protection of critical habitat prohibits the destruction of the habitat caused by human activities, but not the activities themselves. The designation of additional critical habitat would not result in any automatic changes to activities within these areas. While there is spatial overlap between existing Resident Killer Whale critical habitat and the fishery management measures the Department recently put in place in key Southern Resident Killer Whale foraging areas, these current fishing measures are not directly related to this specific review process on the amended Recovery Strategy. There are no immediate plans to add new closures or to change the 2018 fisheries closures that protect the key foraging areas as described in the 2018 Southern Pacific Salmon Integrated Fisheries Management Plan. If additional management measures were to be considered in the future, these would follow existing processes and requirements for consultation under the relevant act(s) (e.g. the Fisheries Act).

Q4: Additional comments?

A4: [These are all previously approved] The Government of Canada is committed to protecting these whales, and is taking actions to protect and recover the species. We are weighing all the options to ensure protections are in place as rapidly as possible. The Government of Canada has taken and continues to take concrete action to protect Southern Resident Killer Whales, such as:

- We have introduced new rules that will prohibit vessels from approaching Resident killer Whales closer than 200 m—this will help minimize noise disturbance and allow the whales to feed more easily.

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- The Government of Canada has been working closely with the Vancouver-Fraser Port Authority's Enhancing Cetacean Habitat and Observation (ECHO) Program to conduct studies of trial slowdowns of vessels passing through Haro Strait. The results from these studies are being analyzed.
- Budget 2018 includes $167 million dedicated to protected endangered whales, including Southern Resident Killer Whales.
- Over the last year we have dedicated nearly $20 million under the Oceans Protection Plan in projects to offer tangible protections for marine mammals including Southern Resident Killer Whales.
- We are investing over $9.5 million in funding from the Coastal Restoration Fund to support eight projects across British Columbia. This work will help restore habitat for Chinook salmon, the preferred prey of the endangered Southern Resident Killer Whale.

We will continue to work collaboratively and take effective measures to protect our environment for future generations.

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Delaney, Paula

From: Shaikh, Sharlene
Sent: July-16-18 5:37 PM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: Record of Cooperation and Consultation: For Review

Hi Heather,

I could not find any consultation-related docs for the 2011 RS amendment. I've asked Jonathan Fershau to check his records to cover our bases but, for now, have updated the Record of Cooperation and Consultation to reflect my current understanding that consultation was deemed not necessary.

I've included the Record below for your ease of review. Note that the yellow highlights are my updates and the rest of the text Christie inserted from the 2011 doc.

Appendix A. Record of cooperation and consultation

Northern and Southern Resident Killer Whales are listed on Schedule 1 of the Species at Risk Act (SARA) and as an aquatic species are under federal jurisdiction and managed by Fisheries and Oceans Canada (DFO): 200 - 401 Burrard Street, Vancouver, BC. Southern Resident Killer Whales are a transboundary population and the United States has developed a recovery plan for Southern Resident Killer Whales as mandated under their Endangered Species Act.

To assist in the development of an initial draft of this recovery strategy, DFO brought together a diverse team of experts from various government, environmental, eco-tourism and non-governmental groups from both Canada and the United States. On the advice of the Species at Risk Coordinator at the BC Aboriginal Fisheries Commission, a letter of invitation followed up by phone calls was sent to all coastal First Nations seeking their interest in participating on the Recovery Team and/or Technical Workshop. No response was received from First Nations for inclusion on either initiative. Subsequent to the consultation process the Namgis First Nation has indicated an interest to be involved in future action planning and local implementation.
A Technical Workshop was hosted in March 2004 to provide a forum for the sharing of knowledge and expertise on Killer Whales with an invited group of scientific and technical stakeholders which was invaluable in assisting the Resident Killer Whale Recovery Team to formulate an effective recovery strategy.

Public news releases announcing the Recovery Team and development of the recovery strategy and a notice of Public Consultations were sent to a distribution list of whale-related contacts provided to DFO in recent years from environmental groups, the eco-tourism sector, non-governmental organizations, government agencies and private citizens. An announcement was also placed in the Vancouver Aquarium Aquanews newsletter.

Additional input was sought through the internet (March 2005) on the draft recovery strategy and a discussion guide and feedback form were available. Responses were received from eco-tourism and non-government organizations and the Mowachaht/Muchalaht First Nations. Input from the United States National Oceanic and Atmospheric Administration and the State of Washington Department of Fish and Wildlife was received through team participation. Feedback on the recovery strategy was also received from other government agencies including: the Department of National Defence, Province of BC, SARA Secretariat, Environment and Climate Change Canada and Natural Resources Canada. An external peer review was conducted by Volker Deecke, Ph.D., University of British Columbia, and Christophe Guinet, Centre d'Etudes Biologiques de Chize, France. All feedback from both government agencies and peer reviewers was incorporated into the recovery strategy.

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A proposed version of the original recovery strategy was posted on the SARA Public Registry for a 60-day public comment period, from June 21 to August 20, 2007. During this time, numerous comments were received from a wide variety of sources including government agencies, commercial and recreational fishing groups, ecotourism operators, non-governmental organizations, and private citizens. All feedback from this comment period was considered and incorporated into the recovery strategy as appropriate. Following the public comment period, the proposed Recovery Strategy was revised by DFO in order to address public comments and to reflect the responsibilities of the competent Minister.

Minor amendments to the recovery strategy were made in 2011 to provide additional clarification regarding critical habitat for Northern and Southern Resident Killer Whales. Consultations were not held on this amendments due to them being minor in nature. In 2018, the recovery strategy was amended again to include identification of additional critical habitat for these populations and to provide minor updates to background and species information.

A 30-day online external review on the draft Amended Recovery Strategy was held from June 12 – July 11, 2018. The external review was a targeted process whereupon possibly affected parties were identified and given an opportunity to provide feedback on the Amended Recovery Strategy prior to public consultation. More than 600 comments were received during the external review from various groups including Wildlife Management Boards, First Nations, local municipalities, commercial and sport fishers, other government agencies, ecotourism operators, non-governmental organizations, and private citizens. Following the external review, one minor change was made to the draft Amended Recovery Strategy.

Additional stakeholder, Aboriginal, and public input will be sought through the publication of the proposed document on the Species at Risk Public Registry for a 60-day public comment period. Comments received will inform the final document.

Sharlene Shaikh
Biologist, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
sharlene.shaikh@dfo-mpo.gc.ca
Tel: 604-666-3811

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Wong, Eva

From: Malikian, Janine
Sent: July-16-18 11:18 AM
To: Brekke, Heather
Cc: Jones, Lisa Ann; McMillan, Christie
Subject: Qs&As - Consultation on amended recovery strategy for the NRKW and SRKW
Attachments: QA_AmendedRecoveryStrategyRKW.docx

Heather,

As discussed, here's the QA document still in approvals (currently with Andy).

Cheers,

Janine

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s.21(1)(a)

s.21(1)(b)

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Wong, Eva

From: Eros, Carole
Sent: July-16-18 3:28 PM
To: Leslie, Karen; Brekke, Heather
Subject: FW: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales
Attachments: QA_AmendedRecoveryStrategyRKW_CE.docx

Not sure if Heather is around.....

From: Eros, Carole
Sent: July-16-18 2:47 PM
To: Brekke, Heather
Subject: RE: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Hi. Some comments for consideration

C

From: Brekke, Heather
Sent: July-16-18 1:53 PM
To: Eros, Carole
Subject: FW: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Hi Carole,

Karen has revised the QA to try and meet this need. It also shortens the text. Does this work for you? Any necessary changes? If so, please let me know ASAP and I'll see if we can get these in time.

Thanks
Heather

From: Leslie, Karen
Sent: July-16-18 1:52 PM
To: Webb, Cheryl; Thomson, Andrew
Cc: Busby, Corina; Brekke, Heather
Subject: RE: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Cheryl, Andy –

I revised the approved Q&As

Please let me know if you are good w the attached,

Cheers,
K

Karen Leslie
604-666-0395

s.21(1)(a)

s.21(1)(b)

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From: Leslie, Karen
Sent: 2018–July-16 12:57 PM
To: Kaba, Kyle; Webb, Cheryl; Thomson, Andrew
Cc: Corina Busby; Malikian, Janine; Brekke, Heather
Subject: RE: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Hi all –

Corina in NHQ has pulled together a "blurb" using materials I provided earlier. Nick is reviewing the "blurb" now, which is to be complemented by the QA's that Andy just approved. The QA's currently provide Andy, Janine, and Heather as contacts, these should be removed before attaching to the MP "blurb" and only the Pacific Region SAR inbox used.

Janine, can you pls provide me w the approved QA's and I will amend appropriately. Note the change wouldn't be reflected in the original approved document, just in the one going to MPs so members of the public have an appropriate contact point for their input.

Karen Leslie
604-666-0395

From: Kaba, Kyle
Sent: 2018–July-16 12:50 PM
To: Webb, Cheryl; Thomson, Andrew; Leslie, Karen
Subject: FW: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales
Importance: High

Hi all – There were a few follow up questions from the briefing this morning. MINO has requested a response by **COB today.** Please see below highlights.

Thanks
Kyle

From: Trudeau, Miriam
Sent: July-16-18 11:14 AM
To: Kaba, Kyle
Cc: Butcher, Ashley; Jarjour, Jasmine; Malko, Carol; Kahn, Zoe
Subject: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales
Importance: High

Kyle,

[redacted]

Can I have something by COB today?

Miriam ☺

From: Knudsen, Mark
Sent: Monday, July 16, 2018 2:00 PM
To: Kaba, Kyle <Kyle.Kaba@dfo-mpo.gc.ca>; Trudeau, Miriam <Miriam.Trudeau@dfo-mpo.gc.ca>
Cc: Mullan-Boudreau, Caitlin <Caitlin.Mullan-Boudreau@dfo-mpo.gc.ca>; Gareau, Laura <Laura.Gareau@dfo-

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mpo.gc.ca>
Subject: FW: Pacific Region Operational Update - Week of July 9, 2018

Hey Kyle/Miriam,

Just looking at the update that just came through. [redacted] and implementation of any Critical Habitat protections by December.

Amended Recovery Strategy for Resident Killer Whales

The external review of proposed Critical Habitat amendments in the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada concluded on July 11th. The review prompted extensive negative reaction from the recreational fishing community. 671 comments were received from the external review, primarily from recreational fishers, who are concerned about their ability to participate in consultations during the summer time and very anxious about the potential of further fishing closures on the west coast of Vancouver Island that may result from the addition of new areas of Critical Habitat. There have also been a number of letters to the Minster and multiple media stories have reported on the issue. Regional staff have attended numerous meetings with recreational fishers, First Nations, local government officials, and others to address questions and outline the review process. [redacted] Staff are also determining whether the start date for the next consultation phase can be moved back to September to accommodate the busy summer season for the recreational fishery without impacting the timeline for completion of the amended Recovery Strategy and implementation of any Critical Habitat protections by December.

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Southern Resident Killer Whale Update

(August 10, 2018 – 14:15 EDT)

Issue: The rapidly deteriorating health condition of Southern Resident Killer Whale (SRKW) J50 of SRKW J-pod has prompted the U.S. National Oceanic and Atmospheric Administration (NOAA) to propose an emergency action plan to treat her. The response team located J50 on Thursday, August 9th and began sampling and treatment. Additionally, J35 was last seen on Wednesday August 8th travelling with her dead calf.

Update:

- NOAA held their daily media briefing at 10 am PDT to update on J50 and J35. DFO was represented by Andrew Thomson (Resource Management), Sheila Thornton (Science) and Paul Cottrell (Marine Mammal Unit), as well as Dr. Marty Haulena (Veterinarian, Vancouver Aquarium) and Lynne Barre (NOAA).
- Yesterday, Thursday August 9, 2018, the response team located J50 in Canadian waters near Race Rocks area (south of Victoria) and followed her into U.S. waters near San Juan Island.
    - Veterinarian Marty Haulena of the Vancouver Aquarium conducted a health assessment of J50, and the response team obtained a breath sample (to assess for infection) and administered a half a dose of antibiotics via a dart.
    - Yesterday on August 9th, DFO Pacific Region issued to NOAA an authorization to "disturb marine mammals" pursuant to section 38 of the MMR, in addition to provisions under section 52 of the FGR and section 74 of SARA to NOAA.
    - This authorization permits NOAA to conduct sampling of J50, including breath, fecal, mucus and skin; visual veterinary health assessment; and to provide antibiotic treatment via pole syringe or remote delivery.
    - J50's poor body condition was first noted in June and has continued to deteriorate since then. This is a small whale that is very thin.
- NOAA has authorized the nutritional support therapy for J50 in U.S. waters where an initial feeding trial of live wild caught Chinook Salmon (2-4 salmon) would be deployed from a fish delivery vessel approximately 50-100 metres in front of J50 using a funneled chute into the water.
    - The initial trial will depend on the conditions, the location, behaviour of J50 and her pod, as well as J50's response to the deployed fish.
    - This trial will inform the possible implementation of fish containing antibiotics for J50 for further treatment.
- Sound Guardian, a research vessel, was schedule to depart at 6 am PDT from the San Juan Islands area in U.S. waters with reporters onboard and is serving as a safety vessel for response operations for J50. This boat has Chinook Salmon onboard as a backup feeding vessel for J50.
- DFO and NOAA teams continue to survey the area and will conduct health assessments and sampling, including a fecal sample, of J50 if possible.
- J35 has been travelling with her dead calf since its death on July 24, 2018, an unprecedented duration for carrying a calf's carcass. Last seen Wednesday August 8, 2018.
    - At this time J35 has not been reported as having poor body condition. Removing the calf is not being considered, due to the interests of human and animal safety.
    - Despite media questions regarding potential intervention, a permit for J35 is not being considered at this time, but would follow a similar permit process to the one for J50.
- DFO and NOAA vessels are continuing to survey Southern Vancouver Island in search of J pod in bad weather conditions. Conditions are forecasted to be poor into Saturday.

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s.21(1)(a)

s.21(1)(b)

Questions and Answers:
External Review of Draft *Amended Recovery Strategy for Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada*

[redacted]

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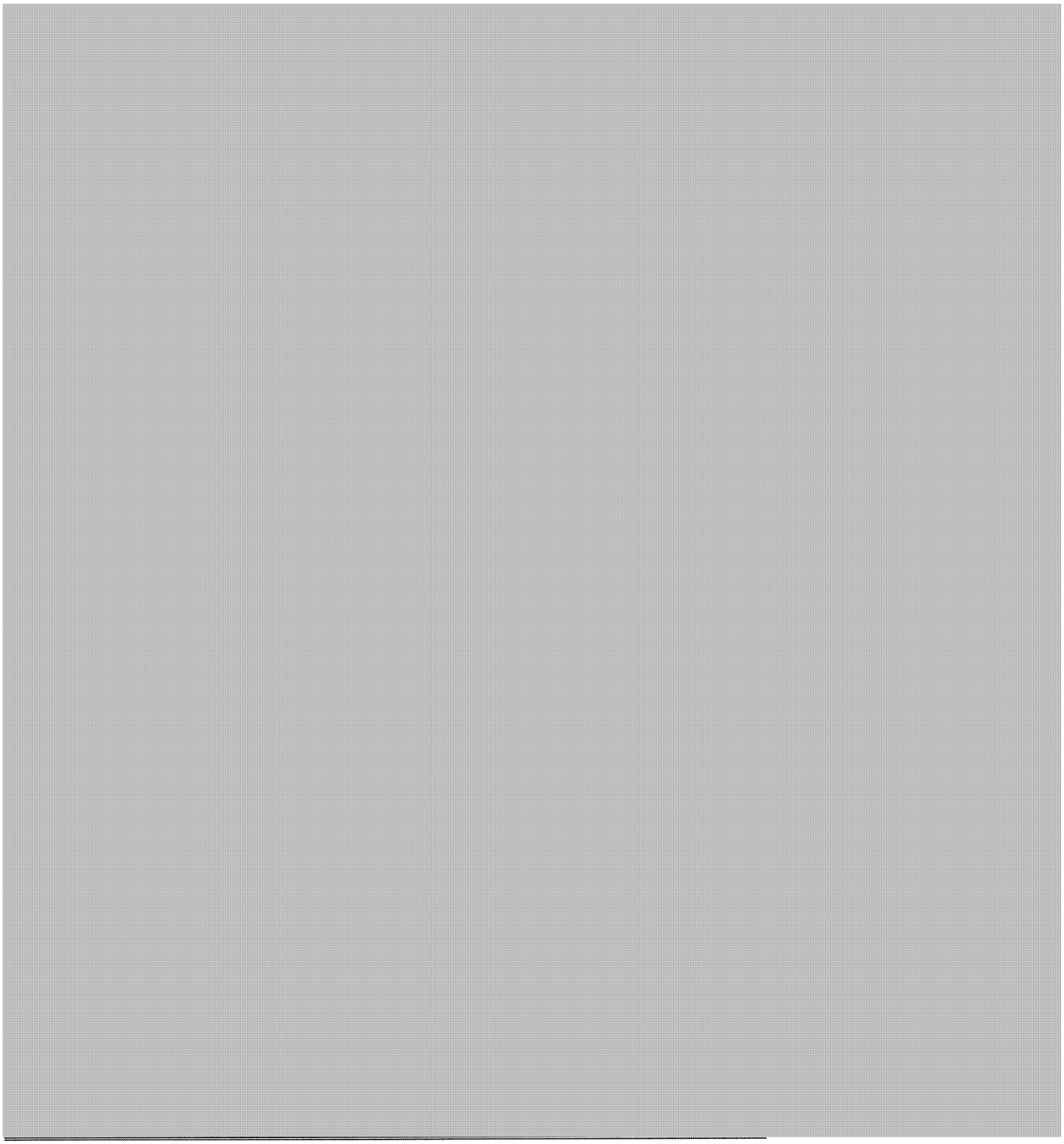
s.21(1)(a)

s.21(1)(b)



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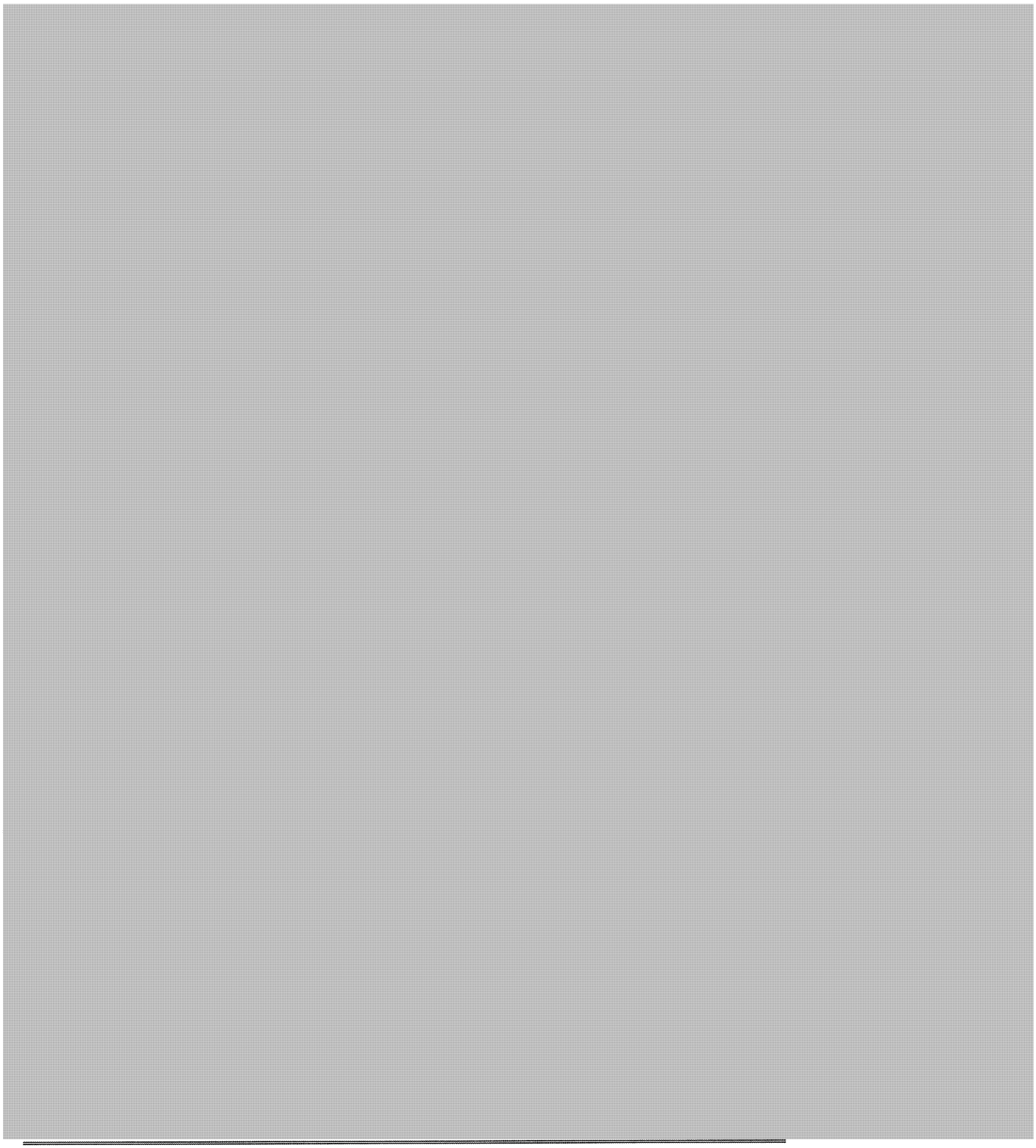

s.21(1)(a)

s.21(1)(b)

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Wong, Eva

From: Davis, Neil
Sent: July-16-18 10:23 AM
To: Johansen, Jeff; Thar, Jonathan; Spence, Brenda; Eros, Carole; Brekke, Heather; Mar, Amy; Cottrell, Paul; Harber, Lee
Subject: FW: ROCS Update - Week of July 09, 2018
Attachments: Revision #4 ROCS Update - Week of July 09, 2018

Hi all

[redacted] an interest in communication, especially on key and emerging issues. As most of you know, we develop weekly summaries of hot button issues for the DM, called ROCs reports. I propose that I forward the summary of issues to you each week so you can quickly scan them and follow along with the ones that may affect you or that you may hear about from external interests. [redacted]

thx
Neil

From: Chin, Jena
Sent: Friday, July 13, 2018 4:35 PM
Cc: O'Grady, Liane <Liane.OGrady@dfo-mpo.gc.ca>; Carlson, Mike <Mike.Carlson@dfo-mpo.gc.ca>; Fulks, Jay <Jay.Fulks@dfo-mpo.gc.ca>; Masson, Colin <Colin.Masson@dfo-mpo.gc.ca>; Murdoch, Sarah <Sarah.Murdoch@dfo-mpo.gc.ca>; Gotch, Steve <Steve.Gotch@dfo-mpo.gc.ca>; Bate, Angela <Angela.Bate@dfo-mpo.gc.ca>; Nener, Jennifer <Jennifer.Nener@dfo-mpo.gc.ca>; Brown, Laura (Pacific) <Laura.L.Brown@dfo-mpo.gc.ca>; Collie, Tyler <Tyler.Collie@dfo-mpo.gc.ca>; Kotyk, Mel <Mel.Kotyk@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Smith, Ken <Ken.Smith@dfo-mpo.gc.ca>; Cheung, Alice <Alice.Cheung@dfo-mpo.gc.ca>; Gallant, Nicole <Nicole.Gallant@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>; Kerr, Lisa <Lisa.Kerr@dfo-mpo.gc.ca>; Russow, Theona <Theona.Russow@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Webb, Allison <Allison.Webb@dfo-mpo.gc.ca>; Whelan, Christie <Christie.Whelan@dfo-mpo.gc.ca>; Prince, Dave <Dave.Prince@dfo-mpo.gc.ca>; Kennedy, Eddy <Eddy.Kennedy@dfo-mpo.gc.ca>; Holmes, John <John.Holmes@dfo-mpo.gc.ca>; Taylor, Nathan <Nathan.Taylor@dfo-mpo.gc.ca>; Houston, Kim <Kim.Houston@dfo-mpo.gc.ca>; MacDougall, Lesley <Lesley.MacDougall@dfo-mpo.gc.ca>; Klaver, March <March.Klaver@dfo-mpo.gc.ca>; Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Bonnet, Terri <Terri.Bonnet@dfo-mpo.gc.ca>; Wong, Cindy <Cindy.Wong@dfo-mpo.gc.ca>; Cauffope, Genevieve <Genevieve.Cauffope@dfo-mpo.gc.ca>; Mah, Richard <Richard.Mah@dfo-mpo.gc.ca>; Davies, Sandra <Sandra.Davies@dfo-mpo.gc.ca>
Subject: RE: ROCS Update - Week of July 09, 2018

Hi Folks,

FYI - Please see attached email for four ROCS paragraphs brought forward to Andy this week.

Hope everyone has a lovely weekend!

Cheers,

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Jena Chin
Integrated Aboriginal Programs Coordinator
Aboriginal Programs Division
Jena.Chin@dfo-mpo.gc.ca
Tel: 604.666.2410

From: Chin, Jena
Sent: July-12-18 1:52 PM
To: Thomson, Andrew
Cc: O'Grady, Liane; Carlson, Mike; Fulks, Jay; Masson, Colin; Murdoch, Sarah; Gotch, Steve; Bate, Angela; Nener, Jennifer; Brown, Laura (Pacific); Collie, Tyler; Kotyk, Mel; Lowe, Carmel; Smith, Ken; Cheung, Alice; Gallant, Nicole; Girouard, Louise; Kerr, Lisa; Russow, Theona; Webb, Cheryl; Webb, Allison; Whelan, Christie; Prince, Dave; Kennedy, Eddy; Holmes, John; Taylor, Nathan; Houston, Kim; MacDougall, Lesley; Klaver, March; Bate, Dan; Davis, Neil; Bonnet, Terri; Wong, Cindy; Cauffope, Genevieve; Mah, Richard; Davies, Sandra
Subject: ROCS Update - Week of July 09, 2018

Hi Andy,

There is only one ROCS submission ready for submission at this time. We are expecting 3-4 late submissions later today. I will send once I receive the paragraphs.

Amended Recovery Strategy for Resident Killer Whales

The external review of proposed Critical Habitat amendments in the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada concluded on July 11th. Ecojustice submitted comments, including the concern that adding Critical Habitat through the process of amending the Recovery Strategy may be slower than implementing an Emergency Protection Order. DFO is planning to expedite the protection process by implementing the Critical Habitat order (through regulation) concurrent with the approval of the Amended Recovery Strategy by December 2018, which would largely address this concern. The review also prompted extensive negative reaction from the recreational fishing community. 671 comments were received from the external review, primarily from recreational fishers, who are concerned about their ability to participate in consultations during the summer time and very anxious about the potential of further fishing closures on the west coast of Vancouver Island that may result from the addition of new areas of Critical Habitat. There have also been a number of letters to the Minster and multiple media stories have reported on the issue. Regional staff have attended numerous meetings with recreational fishers, First Nations, local government officials, and others to address questions and outline the review process. [redacted] Staff are also determining whether the start date for the next consultation phase can be moved back to September to accommodate the busy summer season for the recreational fishery without impacting the timeline for completion of the amended Recovery Strategy and implementation of any Critical Habitat protections by December.

Cheers,

Jena Chin
Integrated Aboriginal Programs Coordinator
Aboriginal Programs Division
Jena.Chin@dfo-mpo.gc.ca
Tel: 604.666.2410

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s.19(1)

s.21(1)(a)

s.21(1)(b)

Dozie, Juachi

From: Brekke, Heather
Sent: July-16-18 5:07 PM
To: Leslie, Karen
Subject: Update on status of various bits for RKW aRS

We can chat further in our bilat tomorrow, but as a heads up, here's where all files are at:

- **aRS**: only change to recovery strategy will be slight modification in sentence on acoustic environment attribute as described below as well as update to the record on cooperation to include results from external review. For clarity, I have added the change in the sentence in red text below. Next steps/actions:
  - Record of consultation/cooperation: Sharlene is finishing up by end of day or early tomorrow am.
  - Approvals: Team will send a final version of the document to us both for review. We will need to approve by Tuesday.
  - Translation via Lexitech (in-house translator cannot do this week – can likely get back Wednesday
- **BN** I just received it, and intend to have finished my review in advance of our bilat. If you are able to review Tuesday, we could have it in the system for Wednesday.
- **Responses**: We are pulling together the various responses. From what I can tell, we received 11 letters, some to Ministers, and a few that require more Departmental consideration in responses. I have requested confirmation from Rebecca's admins which of these they are already responding to.

Cheers
Heather

From: McMillan, Christie
Sent: July-16-18 4:02 PM
To: Ford, John K
Cc: MacConnachie, Sean; Thornton, Sheila; Doniol-Valcroze, Thomas; Jones, Lisa Ann; Brekke, Heather
Subject: RE: Comments on the draft Amended Recovery Strategy for Resident Killer Whales

Hi all,
Thanks so much for your feedback, John and Sheila.
Based on the input received, I have revised the Amended Recovery Strategy as follows:

1) No changes made
2) The first attribute under for the "acoustic environment" has been changed from:
   "Anthropogenic noise level that is sufficient for effective acoustic social signaling and echolocation to locate prey" to
   "Anthropogenic noise level that does not interfere with life functions and is sufficient for effective acoustic social signaling and echolocation to locate prey"

Thanks again for taking the time to respond, especially during field season. John – glad to hear that PRISMM is going well… can't wait to be out there!
Christie

From: Ford, John K [mailto
Sent: July-16-18 11:24 AM

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To: McMillan, Christie
Cc: MacConnachie, Sean; Thornton, Sheila; Doniol-Valcroze, Thomas; Jones, Lisa Ann; Brekke, Heather
Subject: Re: Comments on the draft Amended Recovery Strategy for Resident Killer Whales

Hi Christie et al.

Sorry I haven't been able to get to this — I've been too busy up on the Monkey's Island! PRISMM is going really well.

Regarding #1, it's true that there are fewer data supporting La Perouse Bank as CH for RKW than there are for Swiftsure. This is largely because there's been less boat-based field work there and we've not yet analysed year-round acoustical data. But there are both NRKW and SRKW encounters there and predation samples of Chinook. Also, NOAA's satellite tag data show SRKW using the La Perouse area in winter. Despite having less information on RKW on La Perouse, the papers cited in our Res Doc that show the importance of La Perouse to Chinook fisheries compelled us to include that area in our assessment of habitats of special importance — I think this was the appropriate precautionary approach. I don't really have any suggestion for additional or revised wording on this.

Regarding #2, I like the addition of the notion of effects on life functions, but I think a phrase like 'does not interfere with life functions' might be better than 'impede', because to me 'impede' has a connotation of slowing down or obstructing, which doesn't seem quite correct.

Must run back on deck to look for whales again!

Regards,

John

On Jul 12, 2018, at 1:09 PM, McMillan, Christie <Christie.Mcmillan@dfo-mpo.gc.ca> wrote:

Hello RKW Amended Recovery Strategy science reviewers,

I know that this is difficult timing given that it is field season, but in order to meet national guidance on the timelines for this document moving forward, we need to receive any responses to this e-mail by **Monday July 16th at 4pm**. Huge apologies for this very short turnaround time… we are all working around the clock to meet these compressed timelines.

The 30-day external review of the draft Amended Recovery Strategy for Northern and Southern Resident Killer Whales has closed as of the end of yesterday. We received 671 comments via our online comment form, e-mails, or letters. The next steps for the Amended Recovery Strategy are to revise the document as required, respond to input as appropriate, and submit the document for regional approval.

Very few of the responses received require potential changes to the Amended Recovery Strategy. There are just a few points that have been raised that we would like to request your feedback on:

1. There have been questions raised, largely by the sport fishing industry, about the inclusion of La Perouse Bank within the boundaries of the critical habitat area off SWVI. Specifically, they have pointed to the lack of specific scientific data supporting La Perouse Bank as an important habitat for RKW. I understand the reasoning for the inclusion of La Perouse, but am wondering if you have any suggestions for wording to provide additional clarity around this.

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Currently, the Amended Recovery Strategy includes the following reference to La Perouse Bank, based on the language in the SAR and Res Doc: "*Critical habitat off southwestern Vancouver Island (Figures 4 and 5) includes the Canadian portions of Swiftsure Bank, where acoustic monitoring between August 2009 and July 2011 indicated considerable habitat use by both Southern and Northern Resident Killer Whales over much of the year. Additionally, it encompasses several other relatively shallow banks, including La Pérouse Bank which, like Swiftsure Bank, is among the most productive fishing areas for Chinook Salmon on the west coast of North America.*"

There is also language throughout the critical habitat section (and the Amended RS) that clearly state that RKW movements are influenced by the availability of Chinook salmon, and that prey availability is a key feature of critical habitat. However, we would like to know if there is any additional clarification or language that you recommend adding to these sentences in the Amended RS, regarding the inclusion of La Perouse Bank in the SWVI critical habitat area, to help address this concern?

2. Ecojustice requested that additional clarification be provided regarding the feature and attributes of the acoustic environment in critical habitat by adding the following separate attribute for this feature: "acoustic habitat quality sufficient for unimpeded foraging and other life functions."
   We believe this information is captured in the existing two attributes for that feature:
   a. "Anthropogenic noise level that is sufficient for effective acoustic social signaling and echolocation to locate prey" and
   b. "Anthropogenic noise level that does not result in loss of habitat availability or function"
   However, to provide some clarification and address this request, we suggest changing the first attribute of the acoustic environment to:
   "Anthropogenic noise level that does not impede life functions, and is sufficient for effective acoustic social signaling and echolocation to locate prey"
   Please let me know if you have any concerns about this suggested change.

3. Ecojustice also requested that the minimum vessel approach distance (physical space required around individual whales) be increased to 400m. However, as this is inconsistent with the 200m approach distance specified in the SAR and with the Amendments to the Marine Mammal Regulations, we are not planning to update the document with this change. Please let me know, however, if you have any comments or feedback on this.

No other comments required changes to the document, and so with the exception of the clarifications above, the document will remain the same as the version of the draft Amended Recovery Strategy sent out for external review on June 12th. Given that most of us are currently or about to be in the field, I have not attached the full document to this e-mail, but please let me know if you would like me to send it for your review and I will do so immediately.

Other key issues raised in the responses during the external review were: concern with the timing of this external review period landing during a fishing period, perceived lack of meaningful consultation, confusion regarding what critical habitat designation is, and concern that critical habitat designation will result in closures immediately or in the future (and subsequent perceived adverse impacts to livelihoods). The Species at Risk Program has held several meetings to address these questions and concerns, including teleconferences with DND, Pacheedaht and Ditidaht Nations, Sport Fish Advisory Board, and West Coast Aquatic (which included First Nation representatives, commercial fishers, recreational fishers, and local and regional government). There has also been media to try to correct the misinformation that was circulating regarding critical habitat and its implications.

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Please feel free to call or e-mail Lisa Jones or myself if you have questions or would like to discuss this further. And again, apologies for this very short turnaround time, especially during field season. We are currently working to have the Proposed Amended Recovery Strategy posted for the 60-day public comment period in mid to late August… which is an incredibly ambitious timeline.

Thank you,

Christie

Christie McMillan
Species At Risk Recovery Planner
Fisheries and Oceans Canada
604-666-4775
Christie.McMillan@dfo-mpo.gc.ca

s.21(1)(a)

s.21(1)(b)

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Dozie, Juachi

From: Brekke, Heather
Sent: July-16-18 3:38 PM
To: Eros, Carole
Subject: RE: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Hi Carole,

I flipped these to Karen an hour ago... sorry didn't CC you!

From: Eros, Carole
Sent: July-16-18 3:28 PM
To: Leslie, Karen; Brekke, Heather
Subject: FW: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Not sure if Heather is around.....

From: Eros, Carole
Sent: July-16-18 2:47 PM
To: Brekke, Heather
Subject: RE: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Hi. Some comments for consideration

C

From: Brekke, Heather
Sent: July-16-18 1:53 PM
To: Eros, Carole
Subject: FW: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Hi Carole,

Karen has revised the QA to try and meet this need. It also shortens the text. Does this work for you? Any necessary changes? If so, please let me know ASAP and I'll see if we can get these in time.

Thanks
Heather

From: Leslie, Karen
Sent: July-16-18 1:52 PM
To: Webb, Cheryl; Thomson, Andrew
Cc: Busby, Corina; Brekke, Heather
Subject: RE: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Cheryl, Andy –

I revised the approved Q&As

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[redacted] Please let me know if you are good w the attached, [redacted]

Cheers,
K

Karen Leslie
604-666-0395

From: Leslie, Karen
Sent: 2018–July-16 12:57 PM
To: Kaba, Kyle; Webb, Cheryl; Thomson, Andrew
Cc: Corina Busby; Malikian, Janine; Brekke, Heather
Subject: RE: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Hi all –

Corina in NHQ has pulled together a "blurb" using materials I provided earlier. Nick is reviewing the "blurb" now, which is to be complemented by the QA's that Andy just approved. The QA's currently provide Andy, Janine, and Heather as contacts, these should be removed before attaching to the MP "blurb" and only the Pacific Region SAR inbox used.

Janine, can you pls provide me w the approved QA's and I will amend appropriately. Note the change wouldn't be reflected in the original approved document, just in the one going to MPs so members of the public have an appropriate contact point for their input.

Karen Leslie
604-666-0395

From: Kaba, Kyle
Sent: 2018–July-16 12:50 PM
To: Webb, Cheryl; Thomson, Andrew; Leslie, Karen
Subject: FW: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales
Importance: High

Hi all – There were a few follow up questions from the briefing this morning. MINO has requested a response by **COB today.** Please see below highlights.

Thanks
Kyle

From: Trudeau, Miriam
Sent: July-16-18 11:14 AM
To: Kaba, Kyle
Cc: Butcher, Ashley; Jarjour, Jasmine; Malko, Carol; Kahn, Zoe
Subject: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales
Importance: High

Kyle,

[redacted]

Can I have something by COB today?

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Miriam ☺

From: Knudsen, Mark
Sent: Monday, July 16, 2018 2:00 PM
To: Kaba, Kyle <Kyle.Kaba@dfo-mpo.gc.ca>; Trudeau, Miriam <Miriam.Trudeau@dfo-mpo.gc.ca>
Cc: Mullan-Boudreau, Caitlin <Caitlin.Mullan-Boudreau@dfo-mpo.gc.ca>; Gareau, Laura <Laura.Gareau@dfo-mpo.gc.ca>
Subject: FW: Pacific Region Operational Update - Week of July 9, 2018

Hey Kyle/Miriam,

and implementation of any Critical Habitat protections by December.

Amended Recovery Strategy for Resident Killer Whales

The external review of proposed Critical Habitat amendments in the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada concluded on July 11th. The review prompted extensive negative reaction from the recreational fishing community. 671 comments were received from the external review, primarily from recreational fishers, who are concerned about their ability to participate in consultations during the summer time and very anxious about the potential of further fishing closures on the west coast of Vancouver Island that may result from the addition of new areas of Critical Habitat. There have also been a number of letters to the Minster and multiple media stories have reported on the issue. Regional staff have attended numerous meetings with recreational fishers, First Nations, local government officials, and others to address questions and outline the review process.

staff are also determining whether the start date for the next consultation phase can be moved back to September to accommodate the busy summer season for the recreational fishery without impacting the timeline for completion of the amended Recovery Strategy and implementation of any Critical Habitat protections by December.

s.21(1)(a)

s.21(1)(b)

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Dozie, Juachi

From: Brekke, Heather
Sent: July-16-18 3:16 PM
To: Leslie, Karen
Subject: RE: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales
Attachments: QA_AmendedRecoveryStrategyRKW V2_hb.docx

Hi Karen,

In chatting with Carole, she has provided a few additional comments for the rec sector – in addition to what I just forwarded.

Cheers
Heather

From: Leslie, Karen
Sent: July-16-18 2:21 PM
To: Webb, Cheryl; Thomson, Andrew
Cc: Busby, Corina; Brekke, Heather
Subject: RE: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Done, see attached. Andy, do you have any comments?

Karen Leslie
604-666-0395

From: Webb, Cheryl
Sent: 2018–July-16 2:16 PM
To: Leslie, Karen; Thomson, Andrew
Cc: Busby, Corina; Brekke, Heather
Subject: RE: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

I am okay with the Q&As, but can we add in Q4 (and maybe elsewhere) that we started engagement in Nov 2017.

C

From: Leslie, Karen
Sent: Monday, July 16, 2018 1:52 PM
To: Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>
Subject: RE: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Cheryl, Andy –

I revised the approved Q&As

Please let me know if you are good w the attached,

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s.21(1)(a)

s.21(1)(b)

Cheers,
K

Karen Leslie
604-666-0395

From: Leslie, Karen
Sent: 2018–July-16 12:57 PM
To: Kaba, Kyle; Webb, Cheryl; Thomson, Andrew
Cc: Corina Busby; Malikian, Janine; Brekke, Heather
Subject: RE: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Hi all –

Corina in NHQ has pulled together a "blurb" using materials I provided earlier. Nick is reviewing the "blurb" now, which is to be complemented by the QA's that Andy just approved. The QA's currently provide Andy, Janine, and Heather as contacts, these should be removed before attaching to the MP "blurb" and only the Pacific Region SAR inbox used.

Janine, can you pls provide me w the approved QA's and I will amend appropriately. Note the change wouldn't be reflected in the original approved document, just in the one going to MPs so members of the public have an appropriate contact point for their input.

Karen Leslie
604-666-0395

From: Kaba, Kyle
Sent: 2018–July-16 12:50 PM
To: Webb, Cheryl; Thomson, Andrew; Leslie, Karen
Subject: FW: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales
Importance: High

Hi all – There were a few follow up questions from the briefing this morning. MINO has requested a response by **COB today.** Please see below highlights.

Thanks
Kyle

From: Trudeau, Miriam
Sent: July-16-18 11:14 AM
To: Kaba, Kyle
Cc: Butcher, Ashley; Jarjour, Jasmine; Malko, Carol; Kahn, Zoe
Subject: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales
Importance: High

Kyle,

[redacted]

Can I have something by COB today?

Miriam ☺

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s.21(1)(a)

s.21(1)(b)

From: Knudsen, Mark
Sent: Monday, July 16, 2018 2:00 PM
To: Kaba, Kyle <Kyle.Kaba@dfo-mpo.gc.ca>; Trudeau, Miriam <Miriam.Trudeau@dfo-mpo.gc.ca>
Cc: Mullan-Boudreau, Caitlin <Caitlin.Mullan-Boudreau@dfo-mpo.gc.ca>; Gareau, Laura <Laura.Gareau@dfo-mpo.gc.ca>
Subject: FW: Pacific Region Operational Update - Week of July 9, 2018

Hey Kyle/Miriam,

and implementation of any Critical Habitat protections by December.

Amended Recovery Strategy for Resident Killer Whales

The external review of proposed Critical Habitat amendments in the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada concluded on July 11th. The review prompted extensive negative reaction from the recreational fishing community. 671 comments were received from the external review, primarily from recreational fishers, who are concerned about their ability to participate in consultations during the summer time and very anxious about the potential of further fishing closures on the west coast of Vancouver Island that may result from the addition of new areas of Critical Habitat. There have also been a number of letters to the Minster and multiple media stories have reported on the issue. Regional staff have attended numerous meetings with recreational fishers, First Nations, local government officials, and others to address questions and outline the review process.

Staff are also determining whether the start date for the next consultation phase can be moved back to September to accommodate the busy summer season for the recreational fishery without impacting the timeline for completion of the amended Recovery Strategy and implementation of any Critical Habitat protections by December.

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s.21(1)(a)

s.21(1)(b)

Questions and Answers:
External Review of Draft *Amended Recovery Strategy for Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada*

[redacted]

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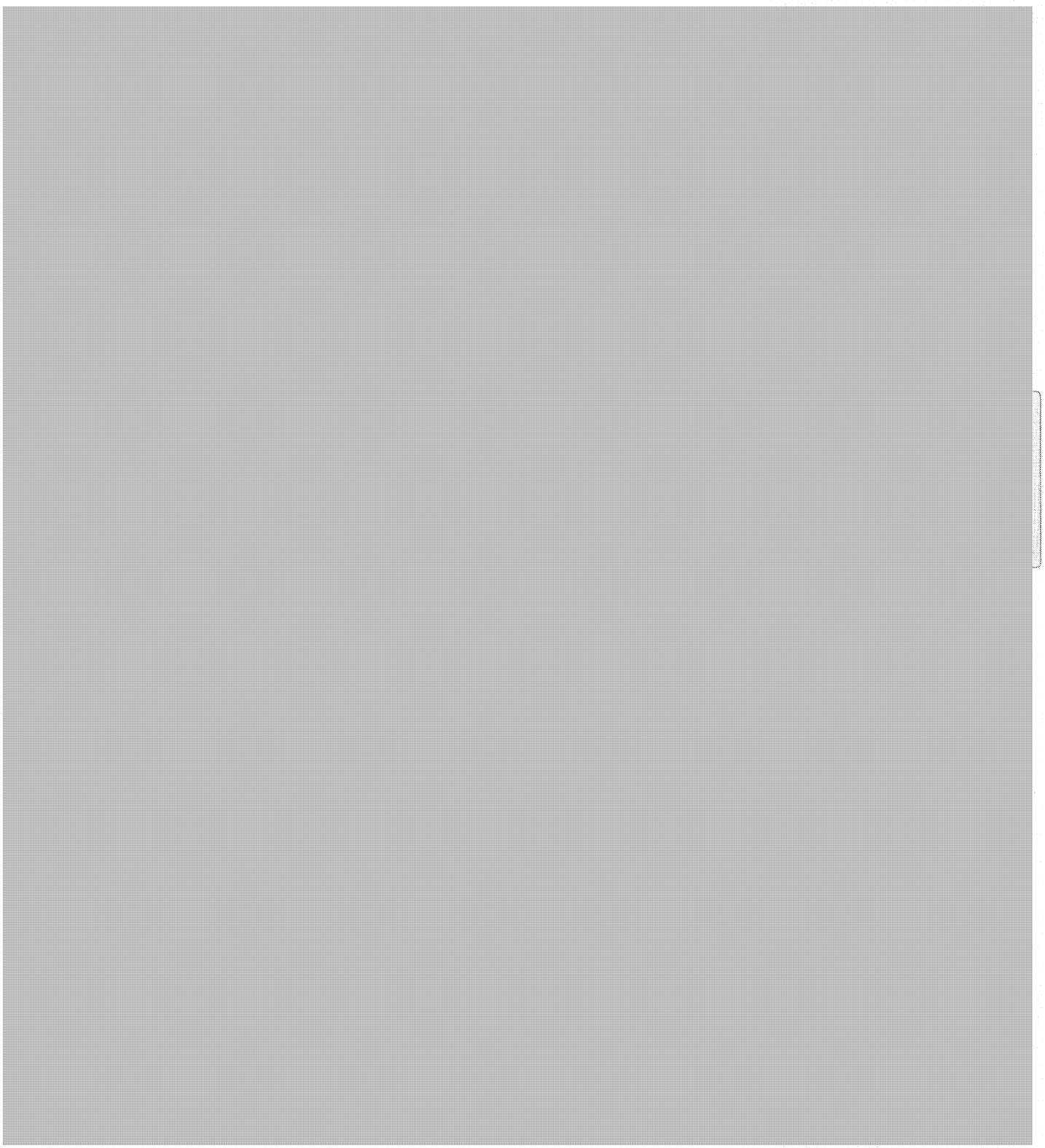
s.21(1)(a)

s.21(1)(b)



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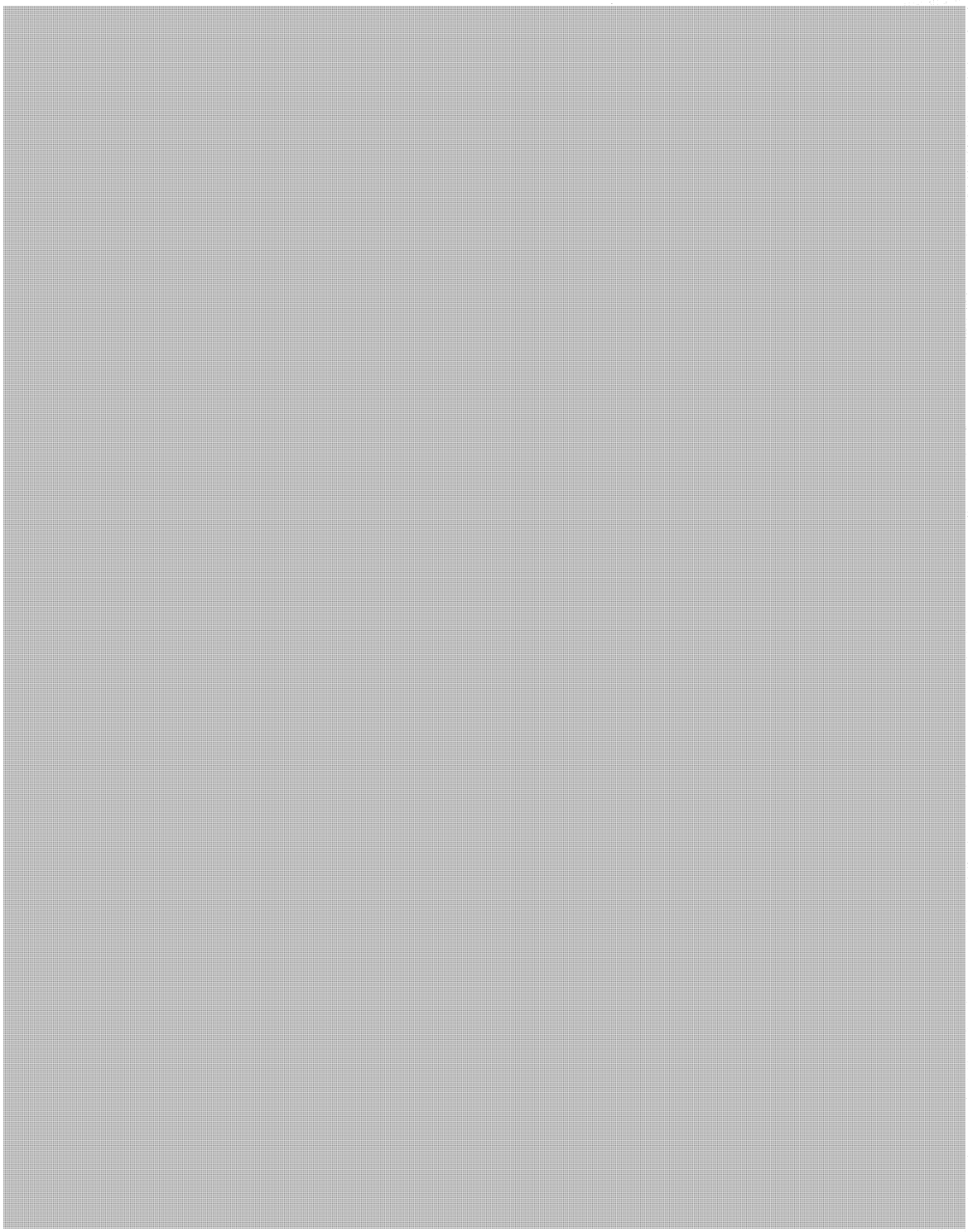
s.21(1)(a)

s.21(1)(b)



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Wong, Eva

From: Shaikh, Sharlene
Sent: July-16-18 10:49 PM
To: Brekke, Heather
Subject: FW: Amended recovery strategy section record of cooperation

Hi Heather,

I'll finalize this tomorrow morning as I need to refer to the species folder to check on the comments received from Wildlife Management Boards.

Cheers,
Sharlene

From: Shaikh, Sharlene
Sent: Monday, July 16, 2018 10:39 PM
To: Shaikh, Sharlene
Subject: Amended recovery strategy section record of cooperation

Minor amendments to the recovery strategy were made in 2011 to provide additional clarification regarding critical habitat for Northern and Southern Resident Killer Whales. Consultations were not held on these amendments due to them being minor in nature. In 2018, the recovery strategy was amended again to include identification of additional critical habitat for these populations and to provide minor updates to background and species information.

A 30-day online external review on the draft Amended Recovery Strategy was held from June 12 – July 11, 2018. The external review was a targeted process whereupon possibly affected parties were identified and given an opportunity to provide feedback on the draft Amended Recovery Strategy prior to public consultation.

670 comments were received during the external review, both online and in letter format, from various groups including Wildlife Management Boards, First Nations, local municipalities, commercial and sport fishers, other government agencies, ecotourism operators, non-governmental organizations, and private citizens. Following the external review, one minor change was made to the draft Amended Recovery Strategy.

Additional stakeholder, Aboriginal, and public input will be sought through the publication of the proposed document on the Species at Risk Public Registry for a 60-day public comment period. Comments received will inform the final document.

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Wong, Eva

From: Jones, Lisa Ann
Sent: July-16-18 4:27 PM
To: Brekke, Heather
Subject: draft BN for RKW RS amendment
Attachments: MECTS-#XXXXXX-Proposed_RKW_Recovery_Strategy_for HB.DOCX

Hi Heather,

Please find attached the draft BN for your review. As mentioned it is on the long side and have kept in the info such that it can be removed as needed. There are comments throughout that should help guide where things might be able to be cut as there is some question of redundancy in the strategic considerations vs in the specific consultation sections.

Cheers
Lisa

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

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s.21(1)(a)

s.21(1)(b)

Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region | Région du Pacifique

Regional Director General | Directrice générale régionale

UNCLASSIFIED
2018-XXX-XXXXX
EKME # XXXXXXX

MEMORANDUM FOR THE REGIONAL DIRECTOR GENERAL, PACIFIC

REGIONAL APPROVAL OF THE PROPOSED AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE
(FOR DECISION)

SUMMARY OF ADVICE TO THE REGIONAL DIRECTOR GENERAL

The purpose of this note is to seek your approval to submit, jointly with the Parks Canada Agency, the proposed *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada* to National Headquarters for consideration to publish on the Species at Risk Public Registry for a 60-day national online public comment period on section 7 (critical habitat) of the document.

The proposed Amended Recovery Strategy incorporates two additional areas of special importance to be identified as critical habitat (CH): the waters off southwestern Vancouver Island and waters of west Dixon Entrance. The document also provides clarification of the functions, features, and attributes for both current and additional CH.

The Department conducted a 30-day online external review on the draft Amended Recovery Strategy from June 12 – July 11, 2018. Based on feedback received, a minor change to the Amended Recovery Strategy was incorporated.

Interest in the proposed Amended Recovery Strategy is anticipated to be high due to the: iconic nature of the species, decreasing population size and current body condition of the Southern Resident Killer Whale (SRKW); Ecojustice petition and subsequent Ministers' opinion on imminent threat; feedback and concern expressed from stakeholders, local and regional government representatives, including four letters sent to the Minister, and media attention during the regional external review process for the draft Amended Recovery Strategy; and, spatial overlap of proposed *Fisheries Act* closures in key SRKW foraging areas with the proposed and existing CH. This proposed Amended Recovery Strategy and subsequent action to protect CH (i.e. via Order) will directly address the petitioners' request to designate additional areas of protected CH;

[redacted]

Comment [LJ1]: HB: do we have newer wording for this or still ok?

Comment [LJ2]: Not all letters were sent to both Ministers, what is right terminology here?

Canada

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s.21(1)(a)

s.21(1)(b)

Your approval is sought by **July 26, 2018** or sooner to permit the proposed Amended Recovery Strategy be submitted to National Headquarters by July 27, 2018 such that the 60-day national online public comment period on the proposed Amended Recovery Strategy can commence by August 20, 2018.

Comment [LJ3]: Add the completion date OF Nov 19??

BACKGROUND

Northern and Southern Resident Killer Whales (RKW) are listed on Schedule I of the *Species at Risk Act* (SARA) as Threatened and Endangered, respectively. The Minister of Fisheries and Oceans and the Minister responsible for the Parks Canada Agency (PCA) are the competent ministers under SARA for the Northern and Southern RKW.

The *Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada* was finalized in 2008 and identified partial critical habitat (CH) for both populations. Northern Resident Killer Whale (NRKW) CH included the waters of Johnstone Strait and southeastern Queen Charlotte Strait, while Southern Resident Killer Whale (SRKW) CH included the transboundary waters in southern BC, including the southern Strait of Georgia, Haro Strait, and Juan de Fuca Strait. These CH areas were legally protected through the making of a SARA Critical Habitat Order (CHO) in 2009. A schedule of studies was included within the 2008 Recovery Strategy to further identify CH areas. In 2011, minor amendments were made to clarify the attributes of the CH section.

The current Amended Recovery Strategy was developed to identify two additional areas as proposed CH: 1) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (important for both Northern and Southern RKW); and 2) waters of west Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit (important for NRKW). Further, the Amended Recovery Strategy provides additional clarification of the functions, features, and attributes for all CH identified for Northern and Southern RKW, and adheres to the Guidelines for the Identification of Critical Habitat for Aquatic Species at Risk (2015). In addition, minor updates were made regarding background information and formatting;

The updated CH section within the Amended Recovery Strategy identifies the four RKW CH areas using the bounding box approach, which means that CH includes areas within the identified geographical boundaries where the described biophysical features, attributes, and the functions they support occur. Attributes of RKW CH include: availability of Chinook Salmon, Chum Salmon, and other important prey species; an acoustic environment that does not impede effective signaling among whales; water quality of a sufficient level to support key prey stocks; unimpeded physical space around individual whales; and, for NRKW, suitable physical habitat to allow for beach rubbing behaviour. The physical space feature specifies a minimum vessel approach distance of 200m which aligns with the Regulations Amending the Marine Mammal Regulations under the *Fisheries Act* (2018). Destruction of any of the features, functions, or

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s.21(1)(a)

s.21(1)(b)

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attributes of CH is prohibited once protected, but human activities may still take place in the bounding box that defines the area.

Comment [LJ4]: Remove? Or important to help understanding of what CH is?

Under the SARA, an amendment to a Recovery Strategy requires cooperation (s.39(1)) and consultation (s.39(3)). To address these requirements, the program undertook a 30-day regional external review of the draft Amended Recovery Strategy which included distribution to Wildlife Management Boards, other departments and jurisdictions, and any Indigenous groups, landowners, or other persons directly affected by the Recovery Strategy. The external review process occurred from June 12 to July 11, 2018. During this process, several teleconference meetings were held to respond to requests from Indigenous groups, local and regional government representatives, and stakeholders for clarification of the process and implications of CH implementation. Approximately 690 responses were received. The majority of responses received were from the recreational fishing sector. All feedback from this regional external review was considered but did not result in substantive changes to the document.

Comment [LJ5]: Include estimate?

The next step in the amendment to the Recovery Strategy process is to send the revised document, the proposed Amended Recovery Strategy, to National Headquarters for approval to publish on the SAR Public Registry for a required (SARA s. 43(1)) 60-day national online public comment period on section 7 (critical habitat). For the proposed Amended Recovery Strategy, this period is expected to start on August 20, 2018.

Comment [LJ6]: Do you have to put SARA in front of the s?

STRATEGIC CONSIDERATIONS

[redacted] the Amended Recovery Strategy is targeted to be posted on the SAR Public Registry by August 20, 2018 for a 60-day national online public comment period on section 7 (CH) of the document. Posting of the proposed Amended Recovery Strategy will trigger the legal requirement for the final Amended Recovery Strategy to be posted to the SAR Public Registry within 90 days (s. 43(1) and (2)); this will require the final Amended Recovery Strategy be posted to the SAR Public Registry by November 19, 2018.

Comment [LJ7]: Alternate wording : Following this, the Government has 30 days to revise the document and post it as a final document (anticipated by end of November/early Dec 2018)

The additional areas proposed as CH in the current proposed Amended Recovery Strategy provide further support for the habitat necessary to recover the Northern and Southern RKW populations. It is anticipated that legal protection of the four RKW CH areas will be accomplished through a SARA CHO for each population. Under section 58(5) of SARA, the CHO is required to be in place within 180 days after the posting of the final Amended Recovery Strategy on the SAR Public Registry (by May 18, 2019); [redacted]

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s.21(1)(a)
s.21(1)(b)
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Ecojustice filed a petition to Ministers LeBlanc and McKenna on January 30, 2018 seeking immediate action for an emergency protection order for SRKW under s.80 of SARA to address the key threats and included a request to designate additional CH. The area identified is the same as that described in the Amended Recovery Strategy off southwest Vancouver Island. On May 24, 2018, the Minister of Fisheries and Oceans and the Minister of Environment and Climate Change Canada issued a news release stating that the SRKW face imminent threat to their survival and recovery, based on the results of a 2018 Imminent Threat Assessment. Subsequently, as per s.80 of SARA, the Ministers must make the recommendation to Cabinet of an emergency order for the SRKW, which may include identification of the habitat necessary to support this recovery as well as measures for the protection and recovery.

Comment [LJ8]: HB – anything new here?

The timing of consultations for the amendment of the recovery strategy have been expedited as a result of the Minister's commitment to the protection and recovery of SRKW, the recent Ecojustice petition and subsequent Ministers' opinion on imminent threat, and the broad public concern for the SRKW. The publication of the final Amended Recovery Strategy, along with its legal protection via two CHOs, is targeted for November 19, 2018.

Comment [LJ9]: HB : do we have newer wording for this or still ok?

High interest in the posting of the proposed Amended Recovery Strategy for national online public comment is anticipated due to the: iconic nature of the species, decreasing population size and current body condition of the SRKW; Ecojustice petition and subsequent Ministers' opinion on imminent threat; and, spatial overlap of recent *Fisheries Act* closures in key SRKW foraging areas with the proposed and existing CH. Feedback received from Indigenous groups, regional and local government representatives, and the recreational fishing sector during the regional external review process for the draft Amended Recovery Strategy highlighted significant concern on the timing of the external review process (occurring during peak fishing season); perceived lack of meaningful consultation , confusion regarding what CH designation is and concern this will result in immediate fishing closures (and subsequent perceived adverse impacts to their livelihood); and, criticism of the science advice used to identify the two additional proposed CH areas. Three letters highlighting similar concerns have been sent to the Ministers from: the Sport Fishing Advisory Board (SFAB); District of Ucluelet; and from a group that includes representatives from the West Coast Aquatic Governance Board, West Coast Fishing Guides Association, Alberni Sport Fishing Advisory Committee, Area G Trollers Association and the BC Commercial Fishing Caucus. Regional and local government representatives and stakeholders, in particular the recreational fishing sector, may continue to express significant concern regarding perceived impacts of implementation of additional CH on culture, fisheries, or tourism, or seek to understand how CH and the *Fisheries Act* closures are related; however, there is anticipated to be general support. Media outreach occurred during the external review process to try and correct information that was circulating. A communications plan is being developed to respond to public enquiries.

Comment [LJ11]: HB : do we have newer wording for this or still ok?

Comment [LJ12]: Keep?

Do we mention the op-ed and, interview as well as the media … Local media interest over the past week has included an op-ed in the Times Colonist, as well as media to try and correct information that was circulating.

SCIENCE ADVICE

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s.21(1)(a)

s.21(1)(b)

In 2017, a Canadian Science Advisory Secretariat (CSAS) Science Advisory Report was published that identified two additional areas of special importance for RKW to be considered as CH (CSAS SAR 2017/011). This science advice follows DFO's operational guidelines for the identification of CH and provides a description of the functions, features, and attributes of the proposed additions to RKW CH and examples of human activities likely to destroy CH.

INTERDEPARTMENTAL CONSULTATIONS

The 2018 proposed Amended Recovery Strategy was developed cooperatively with the PCA. The draft Amended Recovery Strategy was circulated to other government agencies for review and input on June 12, 2018 via the Species at Risk Coordinating Committee (Environment and Climate Change Canada, Parks Canada Agency, and the province of BC) as well as to Transport Canada, the Department of National Defence (DND), the Department of Natural Resources, and U.S. National Oceanic and Atmospheric Administration and Washington Department of Fish and Wildlife. A teleconference meeting was held with the DND on June 29, 2018 where further clarification was provided to enable the implications of the amendment to DND activities be fully understood; no concern was identified, but interest to generally collaborate on RKW recovery measures was noted.

INDIGENOUS CONSULTATIONS

During the 30-day external review process, input on section 7 of the draft Amended Recovery Strategy was sought from all coastal Indigenous groups and Wildlife Management Boards. Advanced notification of the 30-day external review period was sent via email on May 31, 2018. Letters, e-mails, and faxes were sent to these groups at the initiation of the consultation period (June 12, 2018) and included the opportunity of a meeting via phone or in-person, where requested.

Several emails and letters were received from Indigenous groups. A letter from Maa-nulth was sent expressing concern over inclusion of La Perouse as CH and perceived implications to their Treaty Fishing Rights. Emails received from the Uu-a-thluk Program of the Nuu-chah-nulth Tribal Council expressed concern over the potential implication to fishing activity with CH implementation and two members participated in a teleconference meeting organized by West Coast Aquatic where DFO SAR Program provided clarification of what designation of CH is. 'Namgis First Nation sent a letter to identify that they do not consent to designation of any of their territory being identified as CH (existing, but not proposed CH is located in 'Namgis Territory). The Nicola Tribal Association sent a letter expressing concern over the potential implications to their rights to fish for FSC purposes and how they will be compensated when Chinook spawning grounds are protected; however, habitat and spawning grounds of a species' prey are not part of RKW CH).

Comment [LJ13]: Do we need an actual number

Comment [LJ14]: Can we leave this one out? (since it is outside proposed CH areas)

[redacted] letters to the SAR Program [redacted] were received [redacted] detailing their concerns and requesting further meaningful consultation.

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s.19(1)

EXTERNAL CONSULTATIONS

The 30-day external review on section 7 of the draft Amended Recovery Strategy was primarily internet-based using DFO Pacific Region's consultation website and occurred from June 12-July 11, 2018. E-mails were sent to stakeholders and other government agencies. Information was also circulated to advisory boards, and where practicable, information was provided at advisory board meetings within the external review period. Approximately 690 emails were received. The majority of responses received were from the recreational fishing sector. The main concerns expressed were over the timelines for consultation, implication of future management measures, and science advice used to identify CH. Two teleconference meetings were also requested to provide information and clarification on the proposed revisions to CH. On June 27, 2018, the SAR program held a meeting with the executive of the SFAB. On July 10, 2018, a meeting requested, organized and recorded by West Coast Aquatic was held; participants included members of local and regional government [redacted] Uu-a-thluk Program Program of the Nuu-chah-nulth Tribal Council, as well as commercial and recreational fishers. Following these meetings, the SFAB sent a letter to Minister LeBlanc and another letter from a group of representatives from the West Coast Aquatic Governance Board, West Coast Fishing Guides Association, Alberni Sport Fishing Advisory Committee, Area G Trollers Association and the BC Commercial Fishing Caucus was sent to the Ministers of DFO and Environment and Climate Change Canada. These letters also expressed concerns on the timelines for consultation, implication of future management measures, and science advice used to identify CH. A letter from the District of Ucluelet was sent to the Minister outlining similar concerns. Ecojustice sent a letter expressing concern over the lengthier timeline for the CH designation and protection processes under SARA and urged the Ministers to use an emergency order or issue a CHO for the additional areas concurrently with their designation, rather than wait 180 days.

Comment [LJ15]: Get number

Comment [LJ16]: Include estimate?

Comment [LJ17]: Remove if keep in strategic consideration section?

Presentations on the amendment to the Recovery Strategy were also provided at Vancouver Fraser Port Authority's (VFPA) ECHO Advisory Working Group meeting (June 12, 2018) and the Port of Prince Rupert's Port Environmental Stewardship Committee meeting (June 21, 2018). A letter was subsequently received from VFPA and the Chamber of Shipping, both generally expressing support for the additional proposed critical habitat areas, but requesting clarification of what the thresholds and values defining CH are and how they are identified.

Comment [LJ18]: Too much detail?

ADVICE AND RECOMMENDATIONS TO REGIONAL DIRECTOR, ECOSYSTEM MANAGEMENT BRANCH

It is recommended that the proposed *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada* be approved for submission to National Headquarters for consideration to publish it on the SAR Public Registry for a 60-day national online public comment period on section 7 (critical habitat) of the document.

Cheryl Webb

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Regional Director
Ecosystems Management Branch

☐ I concur with the recommendations

☐ I do not concur with the recommendations

_____
Rebecca Reid
Regional Director General
Pacific Region

Attachment(s): (1)

1) Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada [PROPOSED]
2) External Review of the Draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Oricinus orca*) in Canada: Consultation Summary

Comment [LJ19]: GET FROM JF

2018-505-00045 – Regional Consultation of the Draft Amended Recovery Strategy for Northern and Southern Resident Killer Whales
Lisa Jones, 604-666-2792, Species at Risk Recovery Planner/ N. Davis / db

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Fisheries and Oceans Canada
Correspondence Routing Slip

Fiche d'acheminement de correspondance
Pêches et Océans Canada

UNCLASSIFIED
GCCMS # : 2018-505-00045
EKME # : 3920518

To:
Pour: Rebecca Reid

Date:

Object: **REGIONAL APPROVAL OF THE PROPOSED AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE**
Objet:

From / De: Cheryl Webb, Regional Director, Ecosystems Management Branch

Additional Approvals:
Autre(s) approbation(s):

☐	Material for the Minister Documents pour le Ministre	X	Your Signature Votre signature	☐	Information

Screen:
Filtre:

The Department has assessed this issue in full.

- ☒ It contains no reference to matters covered by the screen relating to J.D. Irving Limited.
- ☐ It contains matters referenced in the screen relating to J.D. Irving Limited, but in our view does not engage the screen.
- ☐ In our view, the screen relating to J.D. Irving Limited should be engaged.

Remarks:
Remarques:

This briefing note was developed in consultation with the following regions/sectors:

Neil Davis, Director, Resource Management

Andrew Thomson, Regional Director, Fisheries Management

Carmel Lowe, Regional Director, Science

Comment [LJ20]: POLICY?

Distribution:

Drafting Officer/ Rédacteur: LISA JONES (604-666-2792) / Neil Davis / db

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Dozie, Juachi

From: Brekke, Heather
Sent: July-16-18 1:29 PM
To: Eros, Carole
Cc: Jones, Lisa Ann; McMillan, Christie
Subject: FW: QAs approved
Attachments: QA_AmendedRecoveryStrategyRKW.docx

FYI – hot off the press.

From: Malikian, Janine
Sent: July-16-18 1:29 PM
To: Leslie, Karen; Kaba, Kyle; Webb, Cheryl; Thomson, Andrew
Cc: Busby, Corina; Brekke, Heather
Subject: RE: URGENT INFORMAL: Amended Recovery Strategy for Resident Killer Whales

Karen,

Here are the RDG-approved QA's.

Cheers,

Janine

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DRAFT

QUESTIONS AND ANSWERS

External Review Of Draft Amended Recovery Strategy For Northern And Southern Resident Killer Whales

Issue

The external review of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada concluded on July 11, 2018. In 2017, the Species at Risk program received new science advice supporting two new additional areas of critical habitat. This amendment process is the legal mechanism to update the identified critical habitat for these populations. Recreational fishers have expressed significant concerns over the timelines for review and over fears that the creation of new areas of critical habitat will lead to further fisheries restrictions. These concerns have prompted attention from the media.

Questions and Answers

Q1 What is DFO's objective in amending the recovery strategy?

A1 The Recovery Strategy for Northern and Southern Resident Killer Whales was finalized in 2008 and first amended in 2011. As required by the *Species at Risk Act* (SARA), the 2008 Recovery Strategy identified threats, recovery objectives, and partial critical habitat for Northern and Southern Resident Killer Whales.

The current draft Amended Recovery Strategy updates the critical habitat for Resident Killer Whales, based on new science advice. It identifies two additional important habitat areas as proposed critical habitat. These are: the waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (important for both Northern and Southern Resident Killer Whales), and the waters of west Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit (important for Northern Resident Killer Whales). The amendment also provides clarification of the functions, features and attributes for all critical habitat identified for Northern and Southern Resident Killer Whales.

Once critical habitat is identified in a final recovery document, the critical habitat must be legally protected from destruction within 180 days. Activities themselves are not prohibited by the legal designation of critical habitat. Rather it is the destruction of critical habitat that is prohibited. In many cases, appropriate mitigation could enable activities to be undertaken. For some activities, best management practices may be sufficient to mitigate threats to the species and its habitat so as to avoid destruction. Examples of activities that could destroy critical habitat of Resident Killer Whales are provided in the amended Recovery Strategy, and include activities that could impact on prey availability, as well as acoustic or physical disturbance, and environmental contaminants.

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Q2 Are there plans to extend the current fishing closures to the additional areas of Resident Killer Whale critical habitat?

A2 There are no immediate plans to add new closures or to change the 2018 fisheries closures that protect the key foraging areas as described in the 2018 Southern Pacific Salmon Integrated Fisheries Management Plan.

There has been a lot of confusion regarding the current fishing closures within Juan de Fuca Strait, the Gulf Islands, and the mouth of the Fraser River, with public perception that these closures were the result of critical habitat protection. While there is spatial overlap between existing Resident Killer Whale critical habitat and the fishery management measures the Department recently put in place in key Southern Resident Killer Whale foraging areas, these current fishing measures are not directly related to this specific review process on the amended Recovery Strategy.

Regarding the current fishing closures in Juan de Fuca Strait, Gulf Islands, and mouth of the Fraser River:

- The Department received a range of advice from Indigenous groups and stakeholders on potential management actions for SRKW and BC chinook populations.
- The Department appreciates the advice received and uses this information to inform decision and the potential impacts of alternative management approaches. However, a range of feedback was provided on proposed management measures and there was no agreement on a preferred management approach. A Ministerial decision was sought based on options developed to represent the diverse views from consultations.
- Further feedback and discussions identified that the area from Otter Point to Sheringham Point was also a key foraging area for inclusion in the management measures.
- All areas included in the closures were identified as key Southern Resident Killer Whale foraging areas (previously approved) and considered important areas for effective fishery management actions.
- These management measures serve two purposes: they will increase Chinook salmon prey availability for Southern Resident Killer Whales, and they will also contribute to achieving a precautionary 25-35% reduction in fishing mortality on BC Chinook populations of conservation concern.
- While there is spatial overlap between existing Resident Killer Whale critical habitat and the fishery management measures the Department recently put in place in key Southern Resident Killer Whale foraging areas, these current fishing measures are not directly related to this specific review process on the amended Recovery Strategy. There are no immediate plans to add new closures or to change the 2018 fisheries closures that protect the key foraging areas as described in the 2018 Southern Pacific Salmon Integrated Fisheries Management Plan.

Q3 What has the response been so far to the external review process?

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A3 The external review process for the draft Amended Recovery Strategy for Northern and Southern Resident Killer Whales was open from June 12 to July 11, 2018. This will be followed by a subsequent opportunity for feedback during the 60-day public comment period when the document is posted on the Species at Risk Public Registry, anticipated to begin in Fall 2018.

To date, from the external review process we have received feedback from a diverse group of interests, including the recreational fishing sector, Indigenous groups, environmental groups and other interested individuals.

We are considering, and will continue to consider feedback received during this external review process and the subsequent national public comment period.

Q4 Why did DFO give the public a short window of opportunity to provide feedback on such a large issue?

A4 The external review process for the draft Amended Recovery Strategy for Resident Killer Whales in Canada was open for public comment June 12 through July 11, 2018. This 30-day external review process was intended to solicit input from anyone potentially affected by the specific changes in the contents of the document and follows national guidance for species at risk recovery document reviews. Following this external review period, the document will now be revised where required based on feedback, and posted for a 60-day online public comment period on the Species at Risk Public Registry. This public comment period is anticipated to occur in the Fall of 2018.

Q5 Do current fishing closures apply only to recreational fisheries?

A5 The current fishing closures apply to specified commercial and recreational fisheries in areas within the Juan de Fuca Strait, Gulf Islands, and mouth of the Fraser River, as described here: http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/salmon-saumon/2018-skrw-ers-eng.html .

Specific details of the closure: Recreational finfish and commercial salmon fishing closures are in place to increase Chinook Salmon prey availability for SRKW in the Strait of Juan de Fuca (Sub-Areas 20-3, 20-4, and a portion of 20-5 west of Otter Point), Gulf Islands (Sub-Areas 18-2, 18-4, 18-5, and 18-9). Salmon fishing closure/Chinook non-retention are in place for the mouth of the Fraser River (Subareas 29-6, 29-7, 29-9, and 29-10).

For the 2018 salmon fishing season, the Department is focusing attention on ways to support increased Chinook Salmon prey availability in key foraging areas that spatially overlap with part of the existing SRKW Critical Habitat. The primary objective of the proposed fishing measures is to improve Chinook Salmon availability for SRKW by decreasing potential fishery competition, as well as, minimizing physical and acoustic disturbance in key foraging areas to the extent possible. Chinook availability refers to the combination of both the abundance (i.e. amount) of Chinook in local areas and their accessibility to SRKW. Accessibility

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relates to the ease of obtaining prey and can be affected by physical or acoustic disturbance that impacts SRKW foraging success.

These current recreational angling and commercial salmon fishery closures put in place for 2018 are not directly related to this specific review process on the draft Amended Recovery Strategy for Northern and Southern Resident Killer Whales. There are no immediate plans to add new closures or to change the 2018 fisheries closures that protect the key foraging areas as described in the 2018 Southern Pacific Salmon Integrated Fisheries Management Plan.

Further description of activities currently being undertaken across all sectors can be found here: http://www.dfo-mpo.gc.ca/species-especes/protectingwhales-protegerbaleines/infographic-srkw-eng.html .

Q6 The fishing closure from Otter Point to Sheringham Point was originally planned to cover waters from East Point to Sheringham Point. Why did this change?

A6 The Department received a range of advice on the potential *Fisheries Act* closures from Indigenous groups and stakeholders on potential management actions for SRKW and BC chinook populations. The Department appreciates the advice received and used this information to inform decision and the potential impacts of alternative management approaches. The feedback varied on proposed management measures and thus there was no agreement on a preferred management approach. A Ministerial decision was sought based on options developed to represent the diverse views from consultations.

Further feedback and discussions identified that the area from Otter Point to Sheringham Point was also a key foraging area for inclusion in the management measures.

Q7 Some people and organizations feel that DFO did not take their feedback into consideration when planning the finfish closures. Do you have a response?

A7 The Department received a range of advice on the potential *Fisheries Act* closures from Indigenous groups and stakeholders on potential management actions for SRKW and BC chinook populations. The Department appreciates the advice received and used this information to inform decision and the potential impacts of alternative management approaches. The feedback varied on proposed management measures and thus there was no agreement on a preferred management approach. A Ministerial decision was sought based on options developed to represent the diverse views from consultations.

Q8 How will the fisheries closures help?

A8 Fisheries and Oceans Canada has introduced new temporary recreational and commercial salmon fishery management measures for 2018 to increase prey availability and reduce disturbance from salmon fishing in three key Southern Resident Killer Whale foraging areas: Strait of Juan de Fuca, Gulf Islands and the

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mouth of the Fraser River. (variation of previously approved)

Full closures for the recreational finfish fisheries and the commercial salmon fisheries were implemented in the Strait of Juan de Fuca and the Gulf Island. Partial closures were put in effect for the mouth of the Fraser River. (previously approved)

Recreational finfish closures and commercial salmon fishery closures were considered the most effective way to address both Chinook Salmon removals and physical and acoustic disturbance from fishing vessels within the foraging areas.

Q9 Are these finfish closures a permanent solution?

A9 The fishery management measures put in place for SRKW are for this fishing season (2018) and will be reviewed at the end of this fishing season. Any new proposed fishery management action for future fishing seasons will be consulted on through the Southern Pacific Salmon Integrated Fisheries Management Plan process.

Q10 Have you considered other solutions? *(Responses all previously approved except where noted)*

A10 The Government of Canada is committed to protecting these whales, and is taking actions to protect and recover the species. We are weighing all the options to ensure protections are in place as rapidly as possible. The Government of Canada has taken and continues to take concrete action to protect Southern Resident Killer Whales, such as:

- We have introduced new rules that will prohibit vessels from approaching Resident killer Whales closer than 200 m—this will help minimize noise disturbance and allow the whales to feed more easily. (updated to reflect new MMRs)
- The Government of Canada has been working closely with the Vancouver-Fraser Port Authority's Enhancing Cetacean Habitat and Observation (ECHO) Program to conduct studies of trial slowdowns of vessels passing through Haro Strait. The results from these studies are being analyzed.
- Budget 2018 includes $167 million dedicated to protected endangered whales, including Southern Resident Killer Whales.
- Over the last year we have dedicated nearly $20 million under the Oceans Protection Plan in projects to offer tangible protections for marine mammals including Southern Resident Killer Whales.
- We are investing over $9.5 million in funding from the Coastal Restoration Fund to support eight projects across British Columbia. This work will help restore habitat for Chinook salmon, the preferred prey of the endangered Southern Resident Killer Whale.

We will continue to work collaboratively and take effective measures to protect our environment for future generations.

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DRAFT

More details on work underway across sectors can be found at http://www.dfo-mpo.gc.ca/species-especes/protectingwhales-protegerbaleines/infographic-srkw-eng.html

Spokesperson: Andrew Thomson, Regional Director, Fisheries Management, Pacific 604-666-0751

Communications Contact: Janine Malikian, Pacific Region, 604-666-6766

Program Contact: Heather Brekke, Species at Risk, Marine Team Lead, 604-666-2009

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s.21(1)(a)

s.21(1)(b)

Dozie, Juachi

From: Brekke, Heather
Sent: July-16-18 10:09 AM
To: Fershau, Jonathan
Cc: Jones, Lisa Ann; McMillan, Christie
Subject: FW: proposed Mino Briefing Materials
Attachments: Info for Mino Briefing V1.docx

Numbers are provided in the back end of this document.

From: Leslie, Karen
Sent: July-13-18 4:19 PM
To: Stewart, Julie; Webb, Cheryl; Davis, Neil
Cc: Brekke, Heather; Busby, Corina
Subject: proposed Mino Briefing Materials

Hi all –

Apologies for the late submission. Please find attached a proposed deck for the Mino briefing and supplementary materials for staff. Please review and revise as appropriate.

Cheers,
K

Karen Leslie
604-666-0395

From: Stewart, Julie
Sent: 2018–July-13 2:22 PM
To: Leslie, Karen; Webb, Cheryl; Davis, Neil
Cc: Brekke, Heather; Busby, Corina; McMillan, Christie; Jones, Lisa Ann
Subject: RE: RKW aRS: Potential change to timing for 60d consultation

There is a MinO briefing scheduled for Monday at 1 pm on all this. That will help to clarify the thinking. I've suggested that Pacific Region staff be invited to the call.

[redacted]

Julie Stewart
Director / Directrice
Species at Risk Program / Programme des Espèces en Péril

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200 rue Kent St.
Station 10W061
Ottawa, ON
K1A 0E6

(613) 949-7524 (t)
[redacted] (c)

Julie.stewart@dfo-mpo.gc.ca

From: Leslie, Karen
Sent: Thursday, July 12, 2018 7:23 PM
To: Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>
Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; McMillan, Christie <Christie.Mcmillan@dfo-mpo.gc.ca>; Jones, Lisa Ann <LisaAnn.Jones@dfo-mpo.gc.ca>
Subject: FW: RKW aRS: Potential change to timing for 60d consultation

Hi Cheryl, Neil, Julie –

[redacted]

Cheers,
K

Karen Leslie
604-666-0395

From: Busby, Corina
Sent: 2018–July-12 2:33 PM
To: Leslie, Karen
Cc: Brekke, Heather; Burr, Linda; Stewart, Julie
Subject: RE: RKW aRS: Potential change to timing for 60d consultation

Hi Karen

[redacted]

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[redacted]

Happy to discuss further.

Corina

From: Leslie, Karen
Sent: 2018–July-10 3:57 PM
To: Busby, Corina
Cc: Brekke, Heather
Subject: RKW aRS: Potential change to timing for 60d consultation

Hi Corina,

[redacted]

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[redacted]

Cheers,
K

Karen Leslie
Regional Manager, Species at Risk Program
Fisheries and Oceans Canada / Government of Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

Gestionnaire régional, Programme des espèces en péril
Pêches et Océans Canada / Gouvernement du Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

Pages 68 to / à 71

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pages 102 to / à 105

s.21(1)(a) s.21(1)(b)

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Dozie, Juachi

From: Brekke, Heather
Sent: July-16-18 10:09 AM
To: Jones, Lisa Ann; Fershau, Jonathan
Cc: McMillan, Christie
Subject: RE: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

I have this – will send in a sec.

From: Jones, Lisa Ann
Sent: July-16-18 10:01 AM
To: Fershau, Jonathan; Brekke, Heather
Cc: McMillan, Christie
Subject: RE: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

Hi Jonathan,

I will pull together some lines from the draft BN and send to you so you can add some numbers. Do you have the numbers of supportive vs adverse emails received?

Lisa

From: Fershau, Jonathan
Sent: July-16-18 9:57 AM
To: Brekke, Heather
Cc: Jones, Lisa Ann; McMillan, Christie
Subject: RE: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

I know you are swamped and perhaps on this call. I can do this if you'd like.
jf

From: Malikian, Janine
Sent: July-16-18 9:54 AM
To: Brekke, Heather
Cc: Fershau, Jonathan; Jones, Lisa Ann; McMillan, Christie
Subject: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

Hi Heather,

NHQ Comms has advised there's a briefing with MinO today about the recently closed amended RS external review, and they're asking us about the feedback received.

Would you be able to provide a quick summary? Just a couple of lines will do.

Thanks,

Janine

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Dozie, Juachi

From: Brekke, Heather
Sent: July-16-18 10:36 AM
To: Jones, Lisa Ann; Fershau, Jonathan
Cc: McMillan, Christie
Subject: RE: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

Yes, that would be great.

From: Jones, Lisa Ann
Sent: July-16-18 10:35 AM
To: Brekke, Heather; Fershau, Jonathan
Cc: McMillan, Christie
Subject: RE: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

Perhaps with the caveat that a significant amount of the 'non-supportive' feedback is likely a direct result of perceived implications of the implementation of CH and confusion with how fishery closures under the FA differ from the amendment to the RS under SARA?

From: Brekke, Heather
Sent: July-16-18 10:30 AM
To: Jones, Lisa Ann; Fershau, Jonathan
Cc: McMillan, Christie
Subject: RE: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

Thanks Lisa

I would just add a general statement at the top summarizing the type of feedback and general sense of whether it was positive or negative.

From: Jones, Lisa Ann
Sent: July-16-18 10:27 AM
To: Fershau, Jonathan; Brekke, Heather
Cc: McMillan, Christie
Subject: RE: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

Hi all – to review and add input as needed; the overall list of letters is in the doc that Heather.

- The Department conducted a 30-day online external review on the draft Amended Recovery Strategy from June 12 – July 11, 2018.
- ~680 responses were received from individuals and organizations. Majority of the responses received were from the recreational fishing sector; many of these responses were received following an online petition form that was generated. These responses highlighted significant concern on the timing of the external review process (occurring during peak fishing season); perceived lack of meaningful consultation , confusion regarding what CH designation is and concern this will result in immediate fishing closures (and subsequent perceived adverse impacts to their livelihood); and, criticism of the science advice used to identify the two additional proposed CH areas. All feedback from this regional external review is being considered but is not expected to result in substantive changes to the document.
  JONATHAN ADD IN THE 'SUPPORTIVE' AND 'NOT SUPPORTIVE' IN GENERAL – NOT WITH SPECIFICS??

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- Several meetings have been held as requested to provide information and clarification on the proposed revisions to the recovery strategy: SFAB, Pacheedaht and Ditidaht, West Coast Aquatic (included members of local and regional government (including Gord Johns, Courtenay-Alberni MP), Uu-a-thluk Program of the Nuu-chah-nulth Tribal Council, as well as commercial and recreational fishers).
- 3 letters were sent to Ministers, one each from the Sport Fishing Advisory Board (Gerry Kristianson), District of Ucluelet and from a group of representatives from WCA Governance Board, West Coast Fishing Guides Association, Alberni Sport Fish Advisory Committee, Area G Trollers Association, BC Commercial Fishing Caucus expressing these concerns. 3 other letters were received, including from Ecojustice (urging for designation and protection to occur by 2018), VFPA (general support for amendment; requesting clarification of thresholds and values to identify Critical Habitat), and Chamber of Shipping (general support for amendment; requesting clarification of thresholds and values to identify Critical Habitat) and 4 letters were received from Indigenous groups generally expressing concern over implication to Treaty Fishing Rights and perceived lack of meaningful consultation. Responses back to these letters are being generated.

Cheers
Lisa

From: Fershau, Jonathan
Sent: July-16-18 9:57 AM
To: Brekke, Heather
Cc: Jones, Lisa Ann; McMillan, Christie
Subject: RE: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

I know you are swamped and perhaps on this call. I can do this if you'd like.
jf

From: Malikian, Janine
Sent: July-16-18 9:54 AM
To: Brekke, Heather
Cc: Fershau, Jonathan; Jones, Lisa Ann; McMillan, Christie
Subject: Minister Brieifing today : Northern and Southern Resident Killer Whale consultations

Hi Heather,

NHQ Comms has advised there's a briefing with MinO today about the recently closed amended RS external review, and they're asking us about the feedback received.

Would you be able to provide a quick summary? Just a couple of lines will do.

Thanks,

Janine

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Dozie, Juachi

From: Brekke, Heather
Sent: July-16-18 11:59 AM
To: Leslie, Karen; Busby, Corina
Cc: Webb, Cheryl
Subject: RE: For your expedited review: Qs&As - Consultation on amended recovery strategy for the NRKW and SRKW
Attachments: QA_AmendedRecoveryStrategyRKW.docx

Hi all,

Andy approved. I've attached the latest version of the document I received (pre approval, so some comments are likely now addressed).

Cheers
Heather

From: Leslie, Karen
Sent: July-16-18 11:28 AM
To: Brekke, Heather; Busby, Corina
Cc: Webb, Cheryl
Subject: FW: For your expedited review: Qs&As - Consultation on amended recovery strategy for the NRKW and SRKW

FYI

Karen Leslie
604-666-0395

From: Malikian, Janine
Sent: 2018–July-16 11:17 AM
To: Leslie, Karen
Subject: RE: For your expedited review: Qs&As - Consultation on amended recovery strategy for the NRKW and SRKW

Hi Karen,

Yes I know. They've been with Andy since last week. Just sent him another email. We're hoping to clear region by COB today to get these to NHQ ASAP.

Janine

From: Leslie, Karen
Sent: July-16-18 11:14 AM
To: Malikian, Janine
Subject: RE: For your expedited review: Qs&As - Consultation on amended recovery strategy for the NRKW and SRKW

Hi Janine – when will these Q&As be approved? Mino/NHQ would like them asap.

Karen Leslie

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604-666-0395

From: Malikian, Janine
Sent: 2018–July-10 3:48 PM
To: Leslie, Karen
Cc: Webb, Cheryl
Subject: For your expedited review: Qs&As - Consultation on amended recovery strategy for the NRKW and SRKW
Importance: High

Hi Karen,

We're trying to get these approved for Andy to use at the Marine Mammal Regs tech briefing tomorrow morning out of NHQ:

https://www.canada.ca/en/fisheries-oceans/news/2018/07/government-of-canada-to-hold-a-technical-briefing-on-marine-mammal-regulations.html

Sorry for the tight timeline!

Lisa and Christie have already reviewed, Heather didn't have the time.

Thanks,

Janine

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DRAFT

QUESTIONS AND ANSWERS

External Review Of Draft Amended Recovery Strategy For Northern And Southern Resident Killer Whales

Issue

The external review of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada concluded on July 11, 2018. In 2017, the Species at Risk program received new science advice supporting two new additional areas of critical habitat. This amendment process is the legal mechanism to update the identified critical habitat for these populations. Recreational fishers have expressed significant concerns over the timelines for review and over fears that the creation of new areas of critical habitat will lead to further fisheries restrictions. These concerns have prompted attention from the media.

Questions and Answers

Q1 What is DFO's objective in amending the recovery strategy?

A1 The Recovery Strategy for Northern and Southern Resident Killer Whales was finalized in 2008 and first amended in 2011. As required by the *Species at Risk Act* (SARA), the 2008 Recovery Strategy identified threats, recovery objectives, and partial critical habitat for Northern and Southern Resident Killer Whales.

The current draft Amended Recovery Strategy updates the critical habitat for Resident Killer Whales, based on new science advice. It identifies two additional important habitat areas as proposed critical habitat. These are: the waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (important for both Northern and Southern Resident Killer Whales), and the waters of west Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit (important for Northern Resident Killer Whales). The amendment also provides clarification of the functions, features and attributes for all critical habitat identified for Northern and Southern Resident Killer Whales.

Once critical habitat is identified in a final recovery document, the critical habitat must be legally protected from destruction within 180 days. Activities themselves are not prohibited by the legal designation of critical habitat. Rather it is the destruction of critical habitat that is prohibited. In many cases, appropriate mitigation could enable activities to be undertaken. For some activities, best management practices may be sufficient to mitigate threats to the species and its habitat so as to avoid destruction. Examples of activities that could destroy critical habitat of Resident Killer Whales are provided in the amended Recovery Strategy, and include activities that could impact on prey availability, as well as acoustic or physical disturbance, and environmental contaminants.

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Q2 Are there plans to extend the current fishing closures to the additional areas of Resident Killer Whale critical habitat?

A2 There are no immediate plans to add new closures or to change the 2018 fisheries closures that protect the key foraging areas as described in the 2018 Southern Pacific Salmon Integrated Fisheries Management Plan.

There has been a lot of confusion regarding the current fishing closures within Juan de Fuca Strait, the Gulf Islands, and the mouth of the Fraser River, with public perception that these closures were the result of critical habitat protection. While there is spatial overlap between existing Resident Killer Whale critical habitat and the fishery management measures the Department recently put in place in key Southern Resident Killer Whale foraging areas, these current fishing measures are not directly related to this specific review process on the amended Recovery Strategy.

Regarding the current fishing closures in Juan de Fuca Strait, Gulf Islands, and mouth of the Fraser River:

- The Department received a range of advice from Indigenous groups and stakeholders on potential management actions for SRKW and BC chinook populations.
- The Department appreciates the advice received and uses this information to inform decision and the potential impacts of alternative management approaches. However, a range of feedback was provided on proposed management measures and there was no agreement on a preferred management approach. A Ministerial decision was sought based on options developed to represent the diverse views from consultations.
- Further feedback and discussions identified that the area from Otter Point to Sheringham Point was also a key foraging area for inclusion in the management measures.
- All areas included in the closures were identified as key Southern Resident Killer Whale foraging areas (previously approved) and considered important areas for effective fishery management actions.
- [redacted]
- While there is spatial overlap between existing Resident Killer Whale critical habitat and the fishery management measures the Department recently put in place in key Southern Resident Killer Whale foraging areas, these current fishing measures are not directly related to this specific review process on the amended Recovery Strategy. There are no immediate plans to add new closures or to change the 2018 fisheries closures that protect the key foraging areas as described in the 2018 Southern Pacific Salmon Integrated Fisheries Management Plan.

Q3 What has the response been so far to the external review process?

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A3 The external review process for the draft Amended Recovery Strategy for Northern and Southern Resident Killer Whales was open from June 12 to July 11, 2018. This will be followed by a subsequent opportunity for feedback during the 60-day public comment period when the document is posted on the Species at Risk Public Registry, anticipated to begin in Fall 2018.

To date, from the external review process we have received feedback from a diverse group of interests, including the recreational fishing sector, Indigenous groups, environmental groups and other interested individuals.

We are considering, and will continue to consider feedback received during this external review process and the subsequent national public comment period.

Q4 Why did DFO give the public a short window of opportunity to provide feedback on such a large issue?

A4 The external review process for the draft Amended Recovery Strategy for Resident Killer Whales in Canada was open for public comment June 12 through July 11, 2018. This 30-day external review process was intended to solicit input from anyone potentially affected by the specific changes in the contents of the document and follows national guidance for species at risk recovery document reviews. Following this external review period, the document will now be revised where required based on feedback, and posted for a 60-day online public comment period on the Species at Risk Public Registry. This public comment period is anticipated to occur in the Fall of 2018.

Q5 Do current fishing closures apply only to recreational fisheries?

A5 The current fishing closures apply to specified commercial and recreational fisheries in areas within the Juan de Fuca Strait, Gulf Islands, and mouth of the Fraser River, as described here: http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/salmon-saumon/2018-skrw-ers-eng.html .

Specific details of the closure: Recreational finfish and commercial salmon fishing closures are in place to increase Chinook Salmon prey availability for SRKW in the Strait of Juan de Fuca (Sub-Areas 20-3, 20-4, and a portion of 20-5 west of Otter Point), Gulf Islands (Sub-Areas 18-2, 18-4, 18-5, and 18-9). Salmon fishing closure/Chinook non-retention are in place for the mouth of the Fraser River (Subareas 29-6, 29-7, 29-9, and 29-10).

For the 2018 salmon fishing season, the Department is focusing attention on ways to support increased Chinook Salmon prey availability in key foraging areas that spatially overlap with part of the existing SRKW Critical Habitat. The primary objective of the proposed fishing measures is to improve Chinook Salmon availability for SRKW by decreasing potential fishery competition, as well as, minimizing physical and acoustic disturbance in key foraging areas to the extent possible. Chinook availability refers to the combination of both the abundance (i.e. amount) of Chinook in local areas and their accessibility to SRKW. Accessibility

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relates to the ease of obtaining prey and can be affected by physical or acoustic disturbance that impacts SRKW foraging success.

These current recreational angling and commercial salmon fishery closures put in place for 2018 are not directly related to this specific review process on the draft Amended Recovery Strategy for Northern and Southern Resident Killer Whales. There are no immediate plans to add new closures or to change the 2018 fisheries closures that protect the key foraging areas as described in the 2018 Southern Pacific Salmon Integrated Fisheries Management Plan.

Further description of activities currently being undertaken across all sectors can be found here: http://www.dfo-mpo.gc.ca/species-especes/protectingwhales-protegerbaleines/infographic-srkw-eng.html .

Q6 The fishing closure from Otter Point to Sheringham Point was originally planned to cover waters from East Point to Sheringham Point. Why did this change?

A6 The Department received a range of advice on the potential *Fisheries Act* closures from Indigenous groups and stakeholders on potential management actions for SRKW and BC chinook populations. The Department appreciates the advice received and used this information to inform decision and the potential impacts of alternative management approaches. The feedback varied on proposed management measures and thus there was no agreement on a preferred management approach. A Ministerial decision was sought based on options developed to represent the diverse views from consultations.

Further feedback and discussions identified that the area from Otter Point to Sheringham Point was also a key foraging area for inclusion in the management measures.

Q7 Some people and organizations feel that DFO did not take their feedback into consideration when planning the finfish closures. Do you have a response?

A7 The Department received a range of advice on the potential *Fisheries Act* closures from Indigenous groups and stakeholders on potential management actions for SRKW and BC chinook populations. The Department appreciates the advice received and used this information to inform decision and the potential impacts of alternative management approaches. The feedback varied on proposed management measures and thus there was no agreement on a preferred management approach. A Ministerial decision was sought based on options developed to represent the diverse views from consultations.

Q8 How will the fisheries closures help?

A8 Fisheries and Oceans Canada has introduced new temporary recreational and commercial salmon fishery management measures for 2018 to increase prey availability and reduce disturbance from salmon fishing in three key Southern Resident Killer Whale foraging areas: Strait of Juan de Fuca, Gulf Islands and the

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mouth of the Fraser River. (variation of previously approved)

Full closures for the recreational finfish fisheries and the commercial salmon fisheries were implemented in the Strait of Juan de Fuca and the Gulf Island. Partial closures were put in effect for the mouth of the Fraser River. (previously approved)

Recreational finfish closures and commercial salmon fishery closures were considered the most effective way to address both Chinook Salmon removals and physical and acoustic disturbance from fishing vessels within the foraging areas.

Q9 Are these finfish closures a permanent solution?

A9 The fishery management measures put in place for SRKW are for this fishing season (2018) and will be reviewed at the end of this fishing season. Any new proposed fishery management action for future fishing seasons will be consulted on through the Southern Pacific Salmon Integrated Fisheries Management Plan process.

Q10 Have you considered other solutions? *(Responses all previously approved except where noted)*

A10 The Government of Canada is committed to protecting these whales, and is taking actions to protect and recover the species. We are weighing all the options to ensure protections are in place as rapidly as possible. The Government of Canada has taken and continues to take concrete action to protect Southern Resident Killer Whales, such as:

- We have introduced new rules that will prohibit vessels from approaching Resident killer Whales closer than 200 m—this will help minimize noise disturbance and allow the whales to feed more easily. (updated to reflect new MMRs)
- The Government of Canada has been working closely with the Vancouver-Fraser Port Authority's Enhancing Cetacean Habitat and Observation (ECHO) Program to conduct studies of trial slowdowns of vessels passing through Haro Strait. The results from these studies are being analyzed.
- Budget 2018 includes $167 million dedicated to protected endangered whales, including Southern Resident Killer Whales.
- Over the last year we have dedicated nearly $20 million under the Oceans Protection Plan in projects to offer tangible protections for marine mammals including Southern Resident Killer Whales.
- We are investing over $9.5 million in funding from the Coastal Restoration Fund to support eight projects across British Columbia. This work will help restore habitat for Chinook salmon, the preferred prey of the endangered Southern Resident Killer Whale.

We will continue to work collaboratively and take effective measures to protect our environment for future generations.

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DRAFT

More details on work underway across sectors can be found at http://www.dfo-mpo.gc.ca/species-especes/protectingwhales-protegerbaleines/infographic-srkw-eng.html

Spokesperson: Andy Thomson, Pacific Region Director, Fisheries Management, 604-666-0751

Communications Contact: Janine Malikian, Pacific Region, 604-666-6766

Program Contact: Heather Brekke, Species at Risk, Marine Team Lead, 604-666-2009

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Dozie, Juachi

From: Leslie, Karen
Sent: July-16-18 8:04 AM
To: Thomson, Andrew; Webb, Cheryl; Davis, Neil
Cc: Kaba, Kyle
Subject: RE: proposed Mino Briefing Materials
Attachments: Info for Mino Briefing V1.pptx; Info for Mino Briefing V1.docx

Here is the deck and the supplementary info. Will you be calling in or in the boardroom as well?

Karen Leslie
604-666-0395

From: Thomson, Andrew
Sent: 2018–July-16 8:01 AM
To: Leslie, Karen; Webb, Cheryl; Davis, Neil
Cc: Kaba, Kyle
Subject: Re: proposed Mino Briefing Materials

I'll be on the call.

Please send me the deck

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Leslie, Karen
Sent: Monday, July 16, 2018 7:52 AM
To: Webb, Cheryl; Davis, Neil; Thomson, Andrew
Cc: Kaba, Kyle
Subject: RE: proposed Mino Briefing Materials

NHQ wants Pacific to lead on this morning's Mino briefing. Will any of you be attending?

Kyle, will the call be in the executive boardroom as per usual?

Karen Leslie
604-666-0395

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From: Busby, Corina
Sent: 2018–July-16 7:49 AM
To: Leslie, Karen; Webb, Cheryl; Davis, Neil
Cc: Brekke, Heather; Winfield, Nicholas; Galka, Stephanie; Lagace, Émilie
Subject: RE: proposed Mino Briefing Materials
Importance: High

Hi Karen,

We sent the deck that you prepared to MinO – they were asking for materials. Thank you for putting that together.

We also suggested that since Pac Region had prepared the deck and are most aware of the situation occurring there that you guys lead. Let us know if that is a problem.

Corina

From: Leslie, Karen
Sent: 2018–July-16 10:39 AM
To: Stewart, Julie; Webb, Cheryl; Davis, Neil
Cc: Brekke, Heather; Busby, Corina
Subject: RE: proposed Mino Briefing Materials

Hi all –

Does anyone have any comments/edits for these materials? Are we going to use them?

Also important – will Nick be leading this call? [redacted] and Pac Region RMC is on a 2 day retreat.

Karen Leslie
604-666-0395

From: Leslie, Karen
Sent: 2018–July-13 4:19 PM
To: Stewart, Julie; Webb, Cheryl; Davis, Neil
Cc: Brekke, Heather; Busby, Corina
Subject: proposed Mino Briefing Materials

Hi all –

Apologies for the late submission. Please find attached a proposed deck for the Mino briefing and supplementary materials for staff. Please review and revise as appropriate.

Cheers,
K

Karen Leslie
604-666-0395

From: Stewart, Julie
Sent: 2018–July-13 2:22 PM
To: Leslie, Karen; Webb, Cheryl; Davis, Neil

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Cc: Brekke, Heather; Busby, Corina; McMillan, Christie; Jones, Lisa Ann
Subject: RE: RKW aRS: Potential change to timing for 60d consultation

There is a MinO briefing scheduled for Monday at 1 pm on all this. That will help to clarify the thinking. I've suggested that Pacific Region staff be invited to the call.

[redacted]

Julie Stewart
Director / Directrice
Species at Risk Program / Programme des Espèces en Péril
200 rue Kent St.
Station 10W061
Ottawa, ON
K1A 0E6

(613) 949-7524 (t)
[redacted](c)

Julie.stewart@dfo-mpo.gc.ca

From: Leslie, Karen
Sent: Thursday, July 12, 2018 7:23 PM
To: Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>
Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; McMillan, Christie <Christie.Mcmillan@dfo-mpo.gc.ca>; Jones, Lisa Ann <LisaAnn.Jones@dfo-mpo.gc.ca>
Subject: FW: RKW aRS: Potential change to timing for 60d consultation

Hi Cheryl, Neil, Julie –

[redacted]

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Cheers,
K

Karen Leslie
604-666-0395

From: Busby, Corina
Sent: 2018–July-12 2:33 PM
To: Leslie, Karen
Cc: Brekke, Heather; Burr, Linda; Stewart, Julie
Subject: RE: RKW aRS: Potential change to timing for 60d consultation

Hi Karen

[redacted]

Happy to discuss further.

Corina

From: Leslie, Karen
Sent: 2018–July-10 3:57 PM
To: Busby, Corina
Cc: Brekke, Heather
Subject: RKW aRS: Potential change to timing for 60d consultation

Hi Corina,

[redacted]

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Cheers,
K

Karen Leslie
Regional Manager, Species at Risk Program
Fisheries and Oceans Canada / Government of Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

Gestionnaire régional, Programme des espèces en péril
Pêches et Océans Canada / Gouvernement du Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

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External Review of Draft Amended Recovery Strategy for Northern and Southern Resident Killer Whale (Orcinus orca) in Canada

Minister's office briefing, July 16, 2018

Canada

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Purpose

- To provide context within which the development of the Amended Recovery Strategy is being developed
- To explain the purpose of the Amended Recovery Strategy, the external review, and associated timelines
- To describe how critical habitat is identified and protected, and where impacts from management actions are considered
- To provide information on strategic considerations

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Context

- January 30, 2018 - Ecojustice petition seeking immediate action for SARA S.80 emergency protection order (EPO) to:
  - Address key threats
  - Designate additional areas of critical habitat.

- May 24, 2018 – Ministers find SRKW face imminent threat to their survival and recovery.

[redacted]

- Timeline of December 2018 for identification of CH via amended Recovery Strategy has been communicated to Ecojustice and clients.

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Amended Recovery Strategy

- The current draft Amended Recovery Strategy:
  - Identifies two additional areas as proposed critical habitat,
  - provides additional clarification of the functions, features, and attributes for all critical habitat identified for Northern and Southern RKW,
  - Identifies Activities Likely To Destroy Critical Habitat (ALTD CH)
  - Adheres to the *Guidelines for the Identification of Critical Habitat for Aquatic Species at Risk* (2015).

- December 2018 - Target completion date
  - CH Protection Order is being developed concurrently, for same completion date

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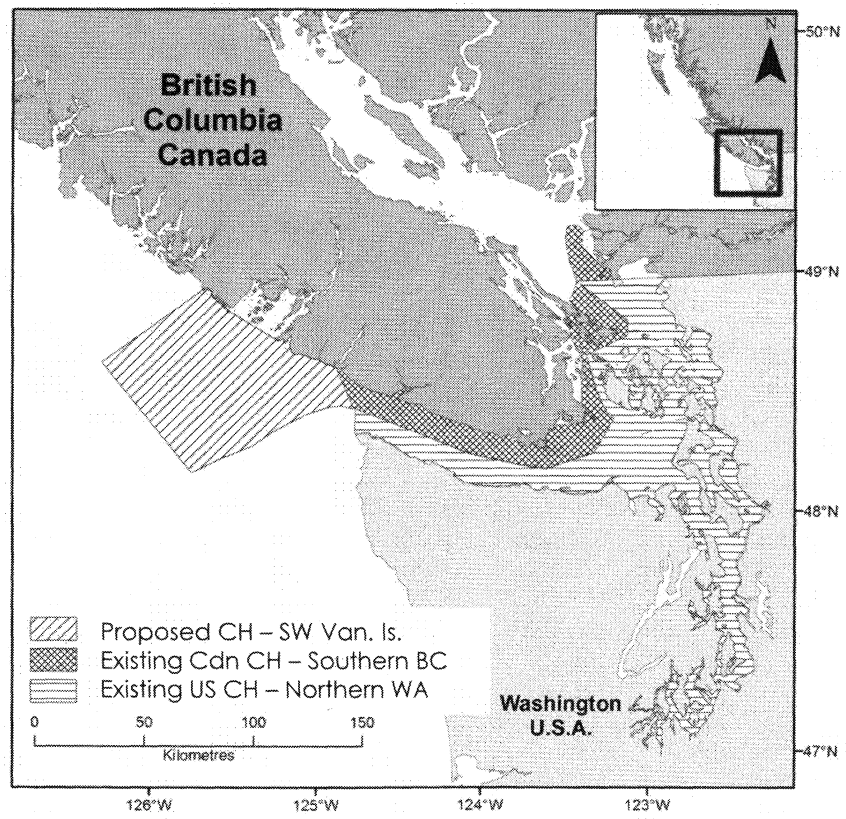
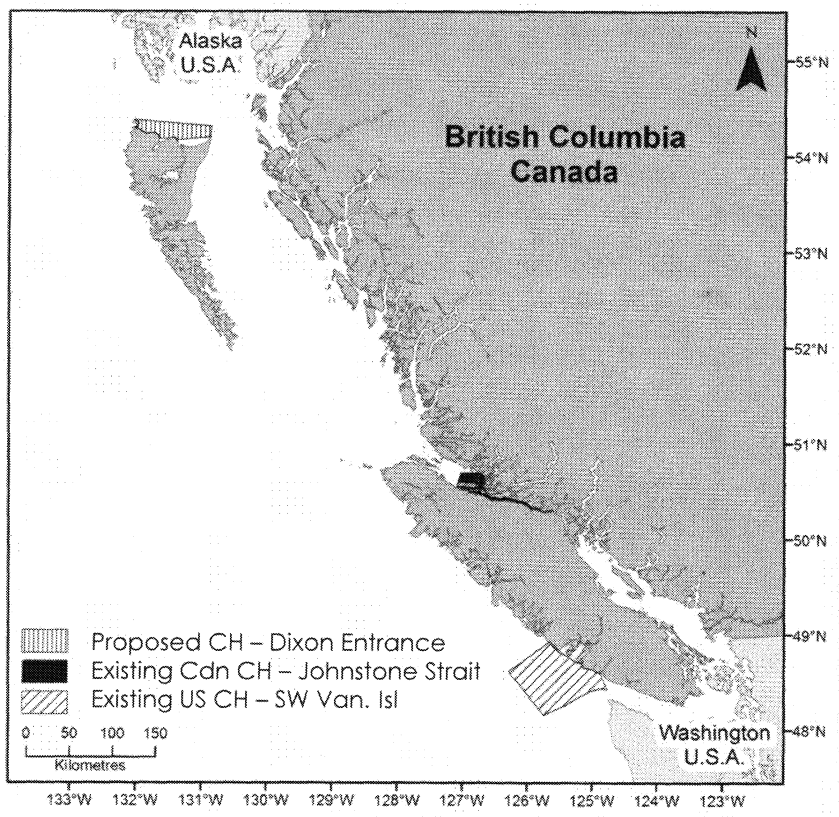
Existing and Proposed Critical Habitat

Existing and Proposed CH for SRKW



Existing and Proposed CH for NRKW



000092

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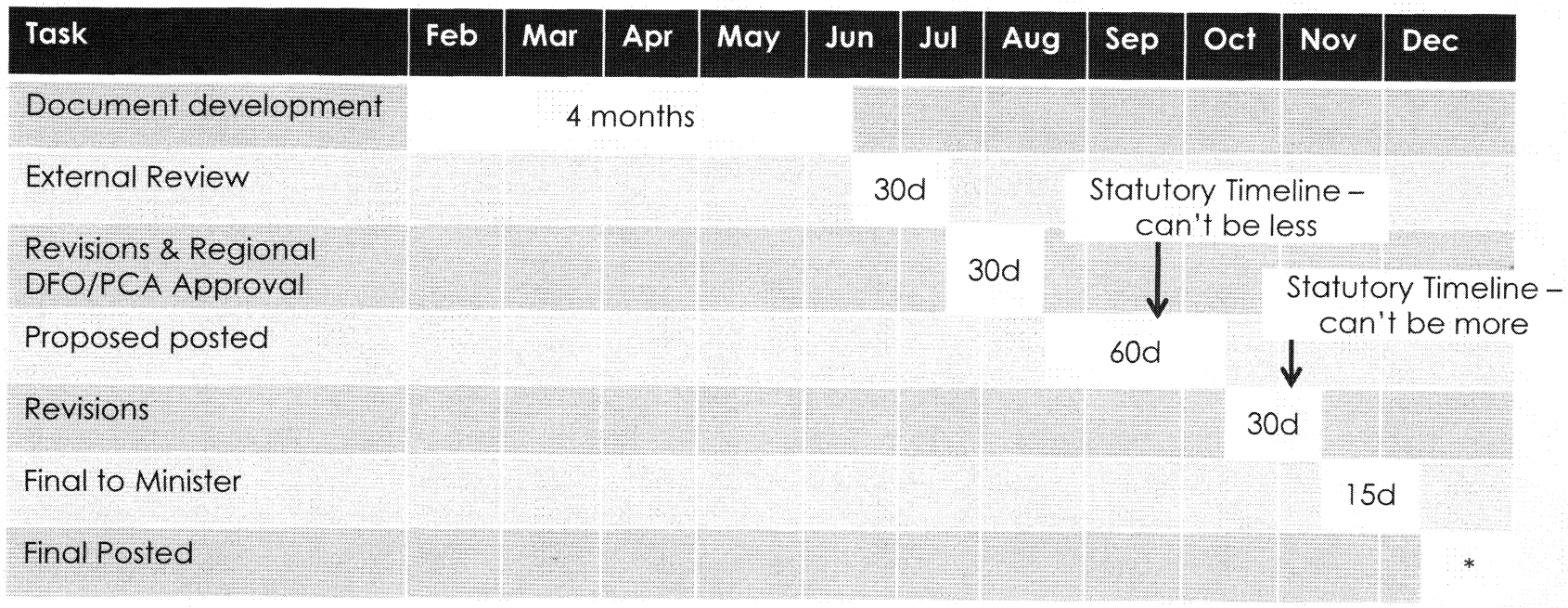
Development Timeline



- *CH Protection Order is being developed on a concurrent timeline, to be posted to CGII December 12.
  - Intention is for final document and Order to be posted at same time.

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Critical Habitat

- Defined by SARA as:
  - *"… the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species."*

- Required by SARA to be identified in a recovery document for threatened, endangered or extirpated species, based on the best available information.

- Within DFO, the process to identify CH is:
  - Is science-based and precautionary,
  - Does not consider socioeconomic factors – can be assessed when developing management actions to mitigate threats of ALTD CH,
  - Iterative, completed only when Minister is of the opinion that the quantity and quality of critical habitat identified is sufficient to achieve the species' population and distribution objectives.

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External Review

- The external review is a step identified in the SAR Program process to develop recovery strategies.
  - Purpose is to address requirements for cooperation and consultation in recovery strategy development, while still meeting SARA requirement to complete recovery strategies in one year.

- Review held June 12 to July 11.
  - 390 direct notifications
  - 648 online responses and 10 direct letters

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Misinterpretation and DFO Response

- Likely due to new SRKW Management Areas in the Salish Sea to provide increased access to prey in key foraging areas,
  - proposed CH misinterpreted as complete fisheries closure, particularly Swiftsure and La Perouse Banks.

- Subsequently DFO engaged the media, as well as held numerous meetings held via conference to clarify the misunderstanding.

- Focus shifted from the presumed closure to:
  - Challenging location of CH and supporting science
  - Demands to extend the external review and push back start of 60 day comment period from mid – August and extend it

- The recreational fisheries sector has been the primary voice, but also commercial fishing, Indigenous groups, and community officials

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Previous Engagement

- DFO has been engaging with Rec Sector and others on proposed CH since Nov 2017
  - Nov - presentation at Sport Fishing Institute Policy and Big Splash Gala Fundraiser
  - Dec – info provided Sport Fish Advisory Board in Nanaimo
  - Jan – letter to First Nations and Stakeholders identifying proposed CH as priority planning item for 2018/19 Northern and Southern Salmon IFMP
  - Mar – info provided at local Sport Fishing Area Committee meetings
  - Feb to Jun - Consultation on Salmon IFMP

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Considerations

- The majority of negative response to the external review is due to misinterpretation of impacts, or criticism of timelines and process
- Activities themselves are not prohibited in areas of critical habitat. Rather it is the destruction of critical habitat that is prohibited.
- In many cases, mitigation can enable activities to be undertaken.
- For some activities, best management practices may be sufficient to mitigate threats so as to avoid destruction.
- Management actions to mitigate threats of activities likely to destroy CH are considered after CH identification and protection
  - Actions are considered on a case-by-case basis, which can include consideration of socio-economic impacts and consultation

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Considerations

- Any delays in finalizing the Amended Recovery Strategy will make it very difficult to meet the Dec 2018 timeline for posting the Order to CGII

- December dates for CGII are Dec 12 and 26
  - Highly unlikely Dec 12 date can be met if timelines extended
  - Dec 26 is a very low possibility but requires all approvals completed the week prior to Christmas - which might be challenging.

- Therefore, a delayed timeline means high likelihood of delayed Order publication to January or February

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ANNEX

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Activities Likely to Destroy Critical Habitat

Threat	Activity	Function affected	Feature affected
Reduced prey availability	Over fishing of prey species & other activities detrimental to habitat and survival of prey	Feeding and foraging	Chinook Salmon and other important prey species
Acoustic disturbance	Vessel traffic Seismic surveys, military and commercial sonars Pile driving, underwater explosions	Feeding and foraging Reproduction, socializing, resting Beach rubbing	Acoustic environment
Environmental contaminants	Deposit of deleterious substances into marine environment	Feeding and foraging Reproduction, socializing, resting	Prey Water column
Physical disturbance	Vessel approach to whales (within 200m) Vessel anchoring in vicinity of rubbing beaches Activities that prevent approach of whales to rubbing beaches; or that displace or disrupt rubbing behaviour	Feeding and foraging Reproduction, socializing, resting Beach rubbing	Physical space
Geophysical disturbance	Shore-based industrial activities that could alter beach substrate Activities that result in alteration of stream flow to rubbing beaches, beach sediment, and siltation	Beach rubbing	Rubbing beaches

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Info for Mino Briefing on External Review of Draft *Amended Recovery Strategy for Northern and Southern Resident Killer Whale* (Orcinus orca) *in Canada*

Monday July 16, 13:00 – 13:30 (EDT)

1 BACKGROUND

1.1 Critical Habitat

SARA recognizes the importance of habitat for species at risk. For aquatic species, habitat is defined in section 2(1) of the Act as "*... spawning grounds and nursery, rearing, food supply, migration and any other areas on which aquatic species depend directly or indirectly in order to carry out their life processes, or areas where aquatic species formerly occurred and have the potential to be reintroduced.*" Critical habitat is made up of "habitat". "Critical habitat" is defined by SARA as "*... the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species.*" Thus, an area that meets the definition of "habitat" for a listed wildlife species with respect to a life process will be necessary for the survival or recovery of that species where there is a lack of such habitat for the species.

Pursuant to SARA s. 41(1)(c) and 49(1)(a), every recovery strategy and action plan developed for a species listed in Schedule 1 of the Act as threatened, endangered or extirpated must identify that species' critical habitat, to the extent possible, based on the best available information.

Critical habitat is identified using the best information available. If the information available is insufficient to fully identify critical habitat, the Act requires that the recovery strategy include a schedule of studies. When critical habitat is identified, the Act requires that examples of activities likely to destroy critical habitat also be identified. Identification of critical habitat is a science-based process, in that it does not consider socio-economic impacts – these are considered in the development of management actions undertaken to mitigate the threat of activities likely to destroy critical habitat.

The Act further requires that the Competent Minister ensure that critical habitat is legally protected. For areas not mentioned in subsection 58(2), this can be achieved in one of two ways: through a protection order made by the competent minister under subsections 58(4) and (5), which triggers the prohibition against the destruction of any part of critical habitat, or by relying on provisions in, or measures under, SARA or any other Act of Parliament including agreements under section 11 of SARA. If it is the latter, the provisions or measures relied upon must be mandatory and enforceable – any prohibition against habitat destruction in such provisions or measures cannot be subject to ministerial discretion. Jurisprudence has refined the understanding of the identification of critical habitat.

Based on SARA and existing policies and guidelines, DFO uses the following guiding principles to identify critical habitat:

1. Critical habitat identification will be identified in the species' recovery strategy. It is a collaborative process between the DFO SARA Program, DFO Science and other relevant operational sectors as well as other levels of Government and Canadians, although socioeconomic factors are not relevant in critical habitat identification.
2. By knowing what the function, features and attributes are of critical habitat, DFO will be better able to know when critical habitat is destroyed. Thus, the manner in which critical habitat is identified (geographic location in conjunction with functions, features and attributes) establishes the framework for its protection. Critical habitat is identified using the best available information. Enough habitat to achieve

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the population and distribution objectives for the species must be identified. This, in turn, will facilitate the survival and recovery of the species.

3. When sufficient habitat necessary to achieve the population and distribution objectives for the species cannot be identified, or, the level of detail regarding the critical habitat is not sufficient to determine whether or not it has been destroyed, a schedule of studies will be developed to identify more critical habitat, or refine our understanding of what has been identified in order to protect it.
4. Identification of critical habitat may be an iterative process that is complete only when the Minister of Fisheries and Oceans is of the opinion that the quantity and quality of habitat identified as critical habitat is sufficient to achieve the population and distribution objectives for the species. As new information regarding critical habitat becomes available, it will be incorporated through amendments to the species' recovery strategy.

1.2 Existing Critical Habitat

The Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada was finalized in 2008 and identified partial critical habitat for both populations. Northern Resident Killer Whale (NRKW) critical habitat included the waters of Johnstone Strait and southeastern Queen Charlotte Strait, while Southern Resident Killer Whale (SRKW) critical habitat included the transboundary waters in southern BC, including the southern Strait of Georgia, Haro Strait, and Juan de Fuca Strait. These critical habitat areas were legally protected via a SARA Critical Habitat Order in 2009. A schedule of studies was included within the 2008 Recovery Strategy to further identify critical habitat areas. In 2011, minor amendments were made to clarify the attributes of critical habitat section.

1.3 Proposed Critical Habitat

In 2017, a Canadian Science Advisory Secretariat (CSAS) Science Advisory Report was published that identified two additional areas of special importance for RKW to be considered as critical habitat (CSAS SAR 2017/011). This science advice follows DFO's operational guidelines for the identification of critical habitat and provides a description of the functions, features, and attributes of the proposed additions to RKW critical habitat and examples of human activities likely to destroy critical habitat.

The current draft Amended Recovery Strategy, Section 7 – Critical Habitat, identifies two additional areas as proposed critical habitat: 1) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (important for both Northern and Southern RKW); and 2) waters of west Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit (important for NRKW). Further, the amendment provides additional clarification of the functions, features, and attributes for all critical habitat identified for Northern and Southern RKW, and adhere to the Guidelines for the Identification of Critical Habitat for Aquatic Species at Risk (2015). These new areas; and the functions, features, and attributes; were identified in DFO CSAS document, *Habitats of Special Importance to Resident Killer Whales* (Orcinus orca) *off the West Coast of Canada* (2017/035). In addition to these changes, minor updates were made regarding background information and formatting; however, changes to content in other sections were not considered.

The updated critical habitat section within the Amended Recovery Strategy identifies the four RKW critical habitat areas using the bounding box approach, which means that critical habitat includes areas within the identified geographical boundaries where the described biophysical features, attributes, and the functions they support occur. Attributes of RKW critical habitat include: availability of Chinook Salmon, Chum Salmon, and other important prey species; an acoustic environment that does not impede effective signaling among whales; water quality of a sufficient level to support key prey stocks; unimpeded physical space around individual whales; and, for NRKW, suitable physical habitat to allow for beach rubbing behaviour. The physical space feature specifies a minimum vessel approach distance of 200m which aligns the new Marine Mammal Regulations under the Fisheries Act. Destruction of any of the features, functions, or attributes of critical habitat is prohibited once protected, but human activities may still take place in the bounding box that defines the area.

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s.21(1)(a)

s.21(1)(b)

s.23

The draft Amended Recovery Strategy was developed by staff within DFO's Species at Risk Program (SARP), with input from DFO Science.

1.4 External Review

The purpose of the external review of the amended Recovery Strategy, which was targeted only to Section 7 – Critical Habitat is to address SARA s.39(1) and s.39(3) requirements for cooperation and consultation, respectively. The external review was held between June 12 and July 11, 2018, and was performed jointly with Parks Canada Agency as the Minister of Environment and Climate Change is also the competent minister for species at risk that occur in federal parks; a portion of the proposed critical habitat off the Southwest coast of Vancouver Island overlaps with Pacific Rim National Park. The external review was performed online, with notifications via written letter and email. Upon request, DFO staff held meetings via conference call to discuss questions and concerns.

Following external review, the document will be revised as appropriate in consideration of relevant input received. Once complete, regional approval for the document will be sought from the Regional Director General, and upon receipt of approval the document is provided to NHQ to provide to the Minister for his consideration to post as a proposed document on the SAR Public Registry for a 60 day comment period.

Despite correspondence and online communications otherwise, the proposed critical habitat was misinterpreted as a complete fisheries closure, particularly Swiftsure and La Perouse Banks. This misinterpretation was perpetuated by the recreational fishing sector via social media, and quickly picked up by local news media. Subsequently DFO engaged the media, as well as held numerous meetings held via conference to clarify the misunderstanding.

After clarifying purpose and intent of critical habitat amendments, focus shifted from the presumed closure to a challenging the location of the critical habitat (i.e. why isn't it somewhere else along the coast), and La Perouse Bank in particular (i.e. there are no hydrophones there, so identifying the area as critical habitat is speculative). Further, there are ongoing and repeated demands to extend the external review and push back the start of the 60 day comment period from mid – August.

2 CONSIDERATIONS

The additional areas proposed as critical habitat in the current draft Amended Recovery Strategy provide further support for the habitat necessary to recover the Northern and Southern RKW populations. It is anticipated that legal protection of the four RKW critical habitat areas will be accomplished through a SARA Critical Habitat Order which will invoke the prohibition against the destruction of any part of the identified critical habitat. Activities likely to destroy critical habitat will be assessed on a case-by-case basis and mitigation will be applied where practicable.

Ecojustice filed a petition to Ministers LeBlanc and McKenna on January 30, 2018 seeking immediate action for an emergency protection order for SRKW under Section 80 of SARA to address the key threats and included a request to designate additional areas of critical habitat.

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

On May 24, 2018, the Minister of Fisheries and Oceans and the Minister of Environment and Climate Change Canada issues a news release stating that the SRKW face imminent threat to their survival and recovery, based on the results of a 2018 Imminent Threat Assessment.

The development of this amended recovery strategy and timing of consultations have been expedited as a result of the Minister's commitment to the protection and recovery of SRKW, the recent Ecojustice petition, and the broad

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public concern for the SRKW. The publication of the final Amended Recovery Strategy to the SAR Public Registry and the complementary Order protecting critical habitat to CGII is targeted for December 2018. This timeline has been communicated in writing to EcoJustice and their clients. As such, process steps and timelines have been significantly compressed, and any delays to the process will almost certainly cause the department to miss the December 2018 deadline.

3 APPENDIX

3.1 Distribution of Notifications

- 390 direct distributions
  - 4 WMBs
  - 122 FNs
  - 136 Tourism Stakeholders
  - 14 ECHO Noise WG
  - 62 ENGOs
  - 29 municipal governments
  - 19 OGDs (Cda, US)
  - All SARCC members

3.2 Responses

- Online – 648 responses
- Direct Written responses – 10
  - First Nations (4)
    - Pacheedaht First Nation (sent by JFK Law Corporation, [redacted] – sent to SARA Pacific team lead directly
    - Ditidaht First Nation (sent by JFK Law Corporation, [redacted] - sent to SARA Pacific team lead directly
    - First Nations of Maa-Nulth Treaty Society ([redacted] – sent to Cheryl and Helen via SARA inbox
    - Namgis First Nation [redacted] – sent to Cheryl Webb via SARA inbox
  - Stakeholder/local and regional government (6)
    - District of Ucluelet [redacted] – sent to Ministers LeBlanc and CCG
    - WCA Governance Board, West Coast Fishing Guides Association, Alberni Sport Fish Advisory Committee, Area G Trollers Association, BC Commercial Fishing Caucus [redacted] - sent to Ministers McKenna and LeBlanc
    - Ecojustice (from Dyna Tuytel) – sent on behalf of ENGOs to Cheryl, Helen, Ministers of DFO and ECCC and SARA inbox
    - Vancouver Fraser Port Authority ([redacted] – sent to SARA inbox (survey filled out)
    - Chamber of Shipping [redacted] – sent to SARA Pacific team lead directly
    - Sport Fish Advisory Board (Gerry Kristianson) – sent to DFO Minister and on to SARA team lead as an FYI

s.19(1)

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Khanna, Sukriti

From: Webb, Cheryl
Sent: July-16-18 6:35 PM
To: Thomson, Andrew; Leslie, Karen; Davis, Neil; Harber, Lee
Subject: Fw: Emergency protections for Southern Resident Killer Whales
Attachments: 2018 07 16 - Letter from Ecojustice to Ministers and Deputy Ministers - Protections for SRKW.pdf; ATT00001..htm

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Sanders , Michelle <michelle.sanders@tc.gc.ca>
Sent: Monday, July 16, 2018 6:19 PM
To: Winfield, Nicholas; D'Iorio, Marc (EC)
Cc: Stewart, Julie; Webb, Cheryl; Busby, Corina; Spicer, Mary-Ann (EC); Goodier, Gwen (EC)
Subject: Fw: Emergency protections for Southern Resident Killer Whales

See attached - latest from Ecojustice...in case it has not trickled down yet.

Let me know if you receive any direction on a response/approach. We have not yet.

Michelle

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Rascanin, Natasha <natasha.rascanin@tc.gc.ca>
Sent: Monday, July 16, 2018 8:54 PM
To: Hanson, Lawrence; Nichols, Megan; Sanders , Michelle
Cc: Masotti, Michael; Wasacz, Patrycja; Corbin, Claude
Subject: Fw: Emergency protections for Southern Resident Killer Whales

From: Keenan, Michael <michael.keenan@tc.gc.ca>
Sent: Monday, July 16, 2018 8:45 PM
To: Dick, Robert; Rascanin, Natasha; Nichols, Megan; Corbin, Claude; Weldon, Jane; MacDonald, Lori; Pham, Thao; Little, Jennifer
Subject: Fwd: Emergency protections for Southern Resident Killer Whales

Begin forwarded message:

From: Dyna Tuytel <[redacted]

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Date: July 16, 2018 at 3:45:31 PM PDT
To: "min@dfo-mpo.gc.ca<mailto:min@dfo-mpo.gc.ca>" <min@dfo-mpo.gc.ca<mailto:min@dfo-mpo.gc.ca>>, "'ec.ministre-minister.ec@canada.ca<mailto:ec.ministre-minister.ec@canada.ca>'" <ec.ministre-minister.ec@canada.ca<mailto:ec.ministre-minister.ec@canada.ca>>, "catherine.blewett@dfo-mpo.gc.ca<mailto:catherine.blewett@dfo-mpo.gc.ca>" <catherine.blewett@dfo-mpo.gc.ca<mailto:catherine.blewett@dfo-mpo.gc.ca>>, "stephen.lucas@canada.ca<mailto:stephen.lucas@canada.ca>" <stephen.lucas@canada.ca<mailto:stephen.lucas@canada.ca>>, "Keenan, Michael" <michael.keenan@tc.gc.ca<mailto:michael.keenan@tc.gc.ca>>
Cc: Margot Venton [redacted] Olivia French [redacted], Betty Gabel [redacted] Jeffery Young [redacted] Scott Wallace [redacted] Christianne Wilhelmson [redacted], Rachael Merrett [redacted] "Jasny, Michael" [redacted] Misty MacDuffee [redacted] Paul C. Paquet" [redacted] Ross Dixon [redacted], Hussein Alidina [redacted] "Minister of Transport / Ministre des Transports (TC)" <TC.MinisterofTransport-MinistredesTransports.TC@tc.gc.ca<mailto:TC.MinisterofTransport-MinistredesTransports.TC@tc.gc.ca>>, "marlo.raynolds@canada.ca<mailto:marlo.raynolds@canada.ca>" <marlo.raynolds@canada.ca<mailto:marlo.raynolds@canada.ca>>, "McCloskey, Shane" <shane.mccloskey@tc.gc.ca<mailto:shane.mccloskey@tc.gc.ca>>
Subject: Emergency protections for Southern Resident Killer Whales

Dear Ministers LeBlanc and McKenna and Deputy Ministers Blewett, Lucas and Keenan,

Please find attached a letter on behalf of the David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation and WWF-Canada in response to the Ministers' letter of July 6 and recent announcements concerning Southern Resident Killer Whales.

Sincerely,

Dyna Tuytel and Margot Venton

Dyna Tuytel
Barrister & Solicitor | Ecojustice<http://www.ecojustice.ca/>
800-744 4th Avenue SW, Calgary, AB T2P 3T4
T: 403-705-0202 | 1-800-926-7744 ext. 307
F: 403-452-6574
[redacted]

Ecojustice is Canada's largest environmental law charity. Help us build the case for a better earth.<https://www.support.ecojustice.ca/ea-action/action?ea.client.id=1943&ea.campaign.id=42200&ea.tracking.id=Outlook>

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s.19(1)

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VANCOUVER CALGARY TORONTO OTTAWA HALIFAX

ecojustice

Dyna Tuytel
800, 744 – 4 Avenue SW
Calgary, AB T2P 3T4
Telephone: (403) 705-0202
Fax: (403) 452-6574
E-Mail: [redacted]
File No: 524

July 16, 2018

Via E-mail: min@dfo-mpo.gc.ca

The Honourable Dominic LeBlanc
Minister of Fisheries and Oceans

Via E-mail: ec.ministre-minister.ec@canada.ca

The Honourable Catherine McKenna
Minister of Environment and Climate Change and Minister Responsible for Parks Canada

Via E-mail: catherine.blewett@dfo-mpo.gc.ca

Catherine Blewett
Deputy Minister of Fisheries and Oceans

Via E-mail: stephen.lucas@canada.ca

Stephen Lucas
Deputy Minister of Environment and Climate Change Canada

Via E-mail: michael.keenan@tc.gc.ca

Michael Keenan
Deputy Minister of Transport Canada

Dear Ministers LeBlanc and McKenna and Deputy Ministers Blewett, Lucas and Keenan:

Re: Emergency measures to protect endangered Southern Resident Killer Whales

We are legal counsel for the David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation and World Wildlife Fund Canada (the "Petitioners").

As you know, on January 30, 2018 the Petitioners sent the Minister of Fisheries and Oceans and Environment and Climate Change (the "Ministers") a petition (the "Petition") for an emergency order for the Southern Resident Killer Whales ("Southern Residents") pursuant to section 80 of the *Species at Risk Act* ("SARA"). The Petition identified a number of urgently needed measures that could be implemented without delay, through an emergency order, to provide protections for the Southern Residents in the 2018 season.

On May 24, Ministers LeBlanc and McKenna (the "Ministers") announced their finding under s. 80(2) of SARA that the Southern Residents face "an imminent threat to both survival and recovery", and released a summary of their assessment. Since the Ministers are of the opinion that the Southern Residents face imminent threats to their survival and recovery, s. 80(2) requires that the Ministers make a recommendation to Cabinet that it make an emergency order for the protection of the Southern Residents – unless equivalent measures have been taken under another Act of Parliament, pursuant to s. 81. To date,

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the Ministers have not made a recommendation to Cabinet or stated that they will rely on equivalent measures, nor have they indicated whether or when they will do either of these things.

By letter dated June 26, 2018, the Petitioners asked the Ministers to clarify their position on whether they will recommend that Cabinet issue an emergency order pursuant to s. 80(2) or SARA, and whether it is the Ministers' opinion that the requirements of s. 81 of SARA are met.

The Ministers responded on July 6, 2018 that they are "currently determining" whether they must recommend that Cabinet issue an emergency order or "whether equivalent measures have been put in place under other federal Acts". They stated that "[t]his question is under active consideration, and [the Ministers] are moving through this process as expeditiously as possible."

The Petitioners remind the Ministers that SARA does not set out a multi-part process for recommending emergency orders. Instead, s. 80 obligates them, if they identify an imminent threat to survival and recovery, to recommend an emergency order if equivalent measures have not been taken under other Acts of Parliament. Following the January 30 Petition, the Ministers took until May 24 to make the imminent threat determination. They have now taken from May 24 until today's date to consider whether there are equivalent measures, and will continue to do so for an unspecified period of time.

It is the Petitioners' position that there are not equivalent measures in place for the purposes of s. 81 of SARA to address the suite of threats to the Southern Residents' survival and recovery, and the Ministers are obligated to urgently recommend an emergency order.

Measures announced to date

On May 24, the Ministers announced certain fisheries measures related to Chinook salmon and Southern Residents. On June 22, 2018 the Ministers and the Minister of Transport announced additional actions with respect to the Southern Residents under the banner of "Canada's Whales Initiative".[1] These consisted of the previously announced fishery removal reduction for Chinook, the previously announced mandatory fishery closures in certain of the Southern Residents' main foraging areas, a mandatory requirement for all marine vessels to stay 200m from killer whales starting July 11, 2018, and increased resources for monitoring and enforcement. The remainder of the measures are voluntary, research-oriented, yet to begin and/or lacking timelines.

In their July 6 letter, the Ministers summarized measures currently being advanced by the government. The Petitioners note that, while the Southern Resident face imminent threats, requiring emergency protections, many of the items identified in the July 6 letter are not yet in place, are not happening urgently, or lack timelines altogether. This includes the work of quieting domestic vessels that transit through Southern Resident critical habitat, as well as the presumably long-term work of advancing work on quieter vessel design at the IMO

It is misleading to characterize many of the measures summarized in the July 6 letter as "addresss[ing] the imminent threats identified for this species" due to the timing and the nature of the measures. For example, research measures of the kind described in the June 22 announcement and July 6 letter, while important, are not equivalent to emergency protections. As another example, while the Petitioners welcome the announcement of the upcoming marine mammal survey, this study is, as described by DFO, a survey of the summer distribution of marine megafauna, emphasizing the abundance of marine mammal populations, with a secondary goal of identifying or refining knowledge of the critical habitat of SARA-

[1] Government of Canada, "The Government of Canada takes immediate action to protect endangered whales through the Oceans Protection Plan" (22 June 2018), online at https://www.canada.ca/en/transport-canada/news/2018/06/the-government-of-canada-takes-immediate-action-to-protect-endangered-whales-through-the-oceans-protection-plan.html [June 22 News Release].

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listed species.[2] The survey is primarily aimed at lesser-known, infrequently sighted species whose numbers are not known, in contrast with the annually counted and individually identifiable Southern Residents.

On June 12, 2018, DFO and Parks Canada provided the Petitioners and others with the critical habitat section of a draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada* (the "Draft Amended Recovery Strategy"). The Draft Amended Recovery Strategy would amend the critical habitat portion of the existing recovery strategy (2008; 2011), including by identifying additional areas. The letter and subsequent e-mail correspondence set out a timeline, in which the final amended recovery strategy would be posted to the registry in late November 2018, assuming no delays. The Ministers will then have 180 days to make an order under s. 58(5) of SARA legally protecting the expanded critical habitat.

The Petitioners submitted comments to DFO and Parks Canada about the Draft Amended Recovery Strategy on July 11, which are appended to this letter. To summarize, the Petitioners welcome the proposed designation of the additional critical habitat areas but have serious concerns about other changes and about the timeline for designation and legal protection.

The Petitioners are concerned about the new approach to the definition of "critical habitat" in the Draft Amended Recovery Strategy. As they explain in the appended comments, it narrows the meaning of critical habitat in a manner inconsistent with SARA, the case law, the existing recovery strategy, and the DFO research papers supporting the expansion of critical habitat. The changes would create uncertainty, impede enforcement, impede management of cumulative effects, and allow critical habitat to become degraded and shrink rather than be protected and restored. In short, the proposed amendments are a backwards step for protection of Southern Resident critical habitat.

The Petitioners are also concerned about the timeline for designation of the additional critical habitat areas. Assuming there are no delays, the amended recovery strategy will be posted until November 2018, and the Ministers could make an order as late as May 2019, leaving the additional areas, which are used year-round by Southern Residents, unprotected until that time. The Petitioners urge the Ministers to recommend that the additional critical habitat areas be immediately designated and protected through an emergency order, pending permanent designation through the ordinary process. Alternatively, they urge the Ministers to issue a critical habitat protection order under s. 58(5) of SARA concurrently with the posting of the amended recovery strategy, rather than wait 180 days.

On July 11, 2018, amendments to the Marine Mammal Regulations were published in the Canada Gazette (the "Amended MMR"). The amendments expand the scope of the regulations to include conservation and protection of marine mammals; identify activities that constitute prohibited disturbance, including approaching any killer whales in B.C. closer than 200 metres; and set out exemptions. The Petitioners have some concerns and questions about the Amended MMR and the Regulatory Impact Analysis Statement (the "RIAS"):

- The June 22 announcement referenced above stated that there would be "a new mandatory requirement for all marine vessels (including recreational boats) to stay at least 200 metres away from killer whales". However, the Amended MMR's prohibitions apply narrowly to commercial and recreational whale-watching. The amended provisions broadly exempt persons "carrying on a[n] [...] activity authorized [...] under the [Fisheries] Act", and exempting "vessels in transit".

[2] Fisheries and Oceans Canada, "Pacific Regional Survey of Marine Megafauna (PRISMM)" (3 July 2018), online at http://dfo-mpo.gc.ca/science/atsea-enmer/missions/2018/prismm-eng.html

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The Petitioners seek clarification of the meaning of "vessels in transit". The Amended MMR do not include any limitation on these exemptions.

- The RIAS states that DFO will rely on "national guidelines" to accompany the amendments" to address matters such as restrictions on viewing times and numbers of vessels in proximity to whales. The Petitioners note that the link provided does not reveal any national guidelines and seek further information as to whether such guidelines are being developed. Further, the Petitioners question whether guidelines, when they exist, will be adhered to by recreational boaters. Indeed, the RIAS states that "although guidelines developed over the past 20 years through government and industry partnerships exist, they are not always adhered to" even by commercial vessels.
- The Petitioners are concerned that the Amended MMR do not specifically address acoustic disturbance, which, as they have observed in the Petition and subsequent correspondence, is known to adversely impact resident killer whales at distances well beyond the 200-metre distance applied by the new regulations. They note that the so-called statement on acoustic disturbance linked to in the RIAS is in fact a statement on seismic surveys, not vessel noise, and that it is from 2007 and therefore does not reflect current research on this issue.
- Finally, the Petitioners question how much the Amended MMR will really help Southern Residents without increased enforcement. The RIAS states that "[e]nforcement costs of these proposed amendments are not expected to increase." The Petitioners further question how DFO can reconcile this statement in the RIAS with the Ministers' June 22 announcement of increased monitoring and enforcement.

The Petitioners also note that several of the measures that they requested in the petition for an emergency order remain outstanding and are not being advanced by government. These include measures to restrict whale watching in key foraging areas, long-term measures and targets to reduce cumulative noise from shipping traffic, and long-term measures to rebuild weak Chinook salmon conservation units.

Measures identified in the Petition

The following chart indicates the status of each of the measures identified in the Petition, many of which are still outstanding or not being advanced by the government:

Measure	Status
1. Designation of additional areas of critical habitat	DFO and Parks Canada have set a timeline for this process. The timeline described to the Petitioners by email indicates that a revised recovery strategy should be posted to the registry in late November 2018. The law then gives the ministers 180 days to make an order protecting the additional critical habitat, meaning that it might not be legally protected until late May 2019, assuming all deadlines are met. The current draft, provided to the Petitioners on June 12, would identify additional areas but weaken critical habitat protection overall, as

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	described in the appended comments by the Petitioners.
2. Measures to ensure prey availability	
2.1 Establish protected Southern Resident feeding refuges in priority feeding areas to enable Southern Residents to forage without competition, interference, noise or disturbance from recreational and commercial salmon fishing, from May 1-November 30.	Mandatory closures to recreational finfishing and commercial salmon fishing were put in place for June 1-September 30 for most but not all of the areas identified in the Petition.[3] The omission of area 20-1 from the closures is significant omission and undermines the closures' effectiveness, as area 20-1 accounts for approximately 42% of the recreational/sport fishing catch.
2.2 Implement commercial and recreational fishing restrictions to increase the terminal abundance of Chinook in habitats identified as critical to Southern Residents and in other important Southern Resident feeding areas, and of other Chinook populations known to be important in the diets of Southern Residents.	The 25-35% reduction in total fishery removals of Chinook salmon announced on May 24[4] is insufficient to ensure stable prey availability or to ensure the recovery of the Chinook stocks themselves. DFO has not shown that the measures being taken will achieve the claimed reduction in catch. This relates to an overall lack of adequate catch and escapement enumeration to effectively manage fisheries.
2.3 DFO must implement rebuilding plans for weak Chinook conservation units– i.e. ones below their spawner maximum sustainable yield – with the objective of maximizing Chinook recruitment to terminal areas and spawning grounds within two generations	Nothing to date.
3. Measures to avoid noise and physical disturbance	
3.1 Measures to reduce noise and disturbance from recreational and commercial whale watching vessels	
3.1.1 Prohibit commercial and recreational whale watching on Southern Resident killer whales in feeding refuges at relevant times of year	Nothing to date.
3.1.2 Establish a 200m stand-off distance and speed restrictions for commercial and recreational whale-watching vessels in proximity to Southern Residents, outside the key foraging areas	Partial measures in place. Amendments to the Marine Mammals Regulations were published on July 11 and prohibit

[3] Fisheries and Oceans Canada, Fishery Notice (30 May 2018), online at http://www-ops2.pac.dfo-mpo.gc.ca/fns-sap/index-eng.cfm?pg=view_notice&DOC_ID=208486&ID=all.

[4] Government of Canada, "Government of Canada takes action to protect Southern Resident Killer Whales" (24 May 2018), online at https://www.canada.ca/en/fisheries-oceans/news/2018/05/government-of-canada-takes-action-to-protect-southern-resident-killer-whales.html.

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	vehicles from approaching any killer whales in B.C. closer than 200m.[5] There are exceptions for activities authorized under the *Fisheries Act* or SARA and for "vessels in transit." There are no speed restrictions.
a) Ensure that the 200-metre stand-off regulation applies, inter alia, to commercial and recreational whale watching vessels, with the exception of those taking actions necessary to avoid an imminent and serious threat to a person, vessel, or the environment	Partial measures in place. Amendments to the Marine Mammals Regulations were published on July 11 and prohibit vehicles from approaching any killer whales in B.C. closer than 200m.[6] There are exceptions for activities authorized under the *Fisheries Act* or SARA and for "vessels in transit." There are no speed restrictions.
b) Prohibit travelling at excessive speeds by establishing a speed restriction of 6 knots maximum for commercial and recreational whale watching vessels within 1 km of Southern Resident killer whales, with the exception of those taking actions necessary to avoid an imminent and serious threat to a person, vessel, or the environment	Nothing to date.
c) Issue direction for such vessels within 1 km of the whales to maximize the time that they remain stationary, with engines off	Nothing to date.
d) Require such vessels, when consistent with navigational safety, to shut off sonars and other underwater transducers within 1 km of the whales	Nothing to date.
3.1.3 Require evaluation and implementation, as appropriate, of measures to limit vessel-time spent in proximity to Southern Resident killer whales	Nothing to date.
3.1.4 Use Minister of Fisheries and Oceans' power under s. 85 of SARA to designate enforcement officers to patrol Southern Resident critical habitat and other key foraging areas	Measures proposed. The Ministers have announced additional monitoring and enforcement capacity: funding for the Straitwatch program for three years, adding fishery officers, and increasing aerial surveillance.[7] The National Aerial Surveillance Program increase "may include support to amended *Marine Mammal Regulations*" but will not be in place until summer 2019 and it is not clear when the Fisheries Aerial

[5] Canada Gazette, Part II, Volume 152, Number 14, registered June 22, 2018, P.C. 2018-842, June 21, 2018, Regulations Amending the Marine Mammal Regulations, SOR/2018-126, online at http://gazette.gc.ca/rp-pr/p2/2018/2018-07-11/html/sor-dors126-eng.html [Amended Marine Mammal Regulations].
[6] *Ibid.*
[7] June 22 News Release.

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	Surveillance and Enforcement increase will be in place.[8] It is the Petitioners' understanding that, as of the date of writing, there is no increased enforcement presence on the water to enforce new measures (including the fisheries closures and the new amended Marine Mammal Regulations) or existing rules (such as the SARA prohibition on harassment). The RIAS suggests no new enforcement effort is anticipated.
3.1.5 Establish a licensing system for commercial whale-watch operators that view Southern Resident killer whales in Canadian waters	Will not be implemented. The government has advised, in the RIAS, that it will not implement a licensing system for commercial whale-watching.
3.2 Operational measures to reduce noise and disturbance from commercial vessels transiting key Southern Resident foraging areas	
3.2.1 Introduce seasonal speed controls for commercial vessels transiting Haro Strait and waters adjacent to the key Southern Resident foraging areas in Juan de Fuca Strait	The Vancouver Fraser Port Authority's ECHO program announced a voluntary trial slow-down from July 1-September 15, with the possibility of continuing to the end of October if the Southern Residents are present.[9] This is not a government-led initiative.
3.2.2 Direct lateral displacement within existing shipping lanes to reduce acoustic exposure in key foraging areas	The government will ask outbound vessels to transit further away from important foraging areas during the summer and continuing into the fall.[10] This is a trial program and entirely voluntary, and the Petitioners understand it may not be implemented until mid-August 2018 or later.
3.2.3 Quiet commercial vessels servicing local routes in Southern Resident critical habitat (with 4 related sub-measures for noise reduction, measurement, maintenance)	Nothing to date. The federal government announced it will be "[w]orking with BC Ferries to develop a noise management

[8] Government of Canada, "Southern Resident Killer Whale Recovery Technical Briefing and Round-Table", June 22, 10:30-12:30PM, DFO Regional Headquarters: 401 Burrard Street, Vancouver [June 22 Technical Briefing], at slide 23.
[9] June 22 News Release; June 22 Technical Briefing at slide 19.
[10] June 22 News Release; June 22 Technical Briefing at 20.

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	plan." No timeline has been provided for this work.[11] Noise management plans are intended as plans for commercial fleet operators to "identify measures to reduce overall noise over time," including operational, maintenance, and technological measures. The BC Ferries plan would be the first.[12]
3.3 Measures to address the cumulative effect of vessel traffic	
3.3.1 Mandate that no net increase in overall noise levels shall occur relative to 2016 levels	Nothing to date.
3.3.2 Require that DFO, in collaboration with Transport Canada, within 18 months, develop and adopt a set of noise reduction targets that are biologically relevant and meaningful to the recovery of the Southern Residents	Nothing to date.

Request

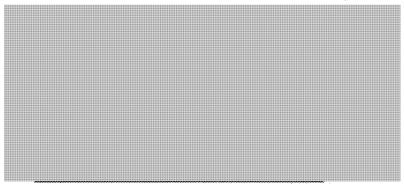
It is the Petitioners' position that, while the recent announcements are important, emergency protections are still needed, and that the measures announced or in place at this time do not constitute "equivalent measures" for the purposes of s. 81 of SARA.

The Petitioners are concerned that the Ministers' ongoing failure to recommend an emergency order is unlawful. They are further concerned that the Ministers have not provided a timeline for their decision. If this situation persists they may be forced to turn to the courts to ensure compliance with SARA.

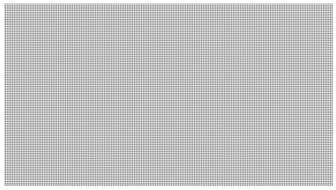
The Petitioners acknowledge that the government is convening a multi-stakeholder group, with a first meeting on July 30, but this forum and its timing will not lend itself well to urgent progress on emergency measures.

The Petitioners therefore request a meeting with the Deputy Ministers and the Ministers' staff copied on this email who they have previously met with, to discuss the gaps between the measures needed and what has been announced, timelines for measures, and the timeline for a decision as to whether to recommend an emergency order. They suggest a telephone meeting as it will be easier to coordinate.

Sincerely,



Dyna Tuytel
Barrister & Solicitor



Margot Venton
Barrister & Solicitor

[11] June 22 News Release.
[12] June 22 Technical Briefing at slide 21.

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Encl.

c. David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation, World Wildlife Fund – Canada

The Honourable Marc Garneau, Minister of Transport

Marlo Raynolds, Chief of Staff to the Minister of Environment and Climate Change

Shane McCloskey, Senior Policy Advisor, Transport Canada

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July 11, 2018

Via E-mail: SARA.XPAC@dfo-mpo.gc.ca

Cheryl Webb
Regional Director
Ecosystems Management Branch
Fisheries and Oceans Canada

Helen Davies
Field Unit Superintendent
Coastal British Columbia Field Unit
Parks Canada Agency

Dear Ms. Webb and Ms. Davies:

Re: External review of the critical habitat section of the draft amended recovery strategy for Resident Killer Whales

We write on behalf of the David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation and World Wildlife Fund Canada (the "Conservation Groups"). We write in response to your June 12, 2018 letter to provide the Conservation Groups' feedback on section 7 of the Species at Risk Act ("SARA") draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada* (the "Draft").

I. The Conservation Groups' previous work on resident killer whale issues

The Conservation Groups have a longstanding interest in, and history of working to protect, the Southern Resident Killer Whales (the "Southern Residents") and their primary prey, Chinook salmon.

The David Suzuki Foundation ("DSF") is a leading Canadian environmental non-profit organization whose combined digital channels engage upwards of one million people weekly. DSF collaborates with all people in Canada, including government and business, to conserve the environment and find solutions that will create a sustainable Canada through evidence-based research, public engagement and policy work. DSF has worked to improve the sustainability of Pacific salmon fisheries in Canada for more than 20 years, participating in planning processes and playing a key role in the design and implementation of Canada's Wild Salmon Policy. DSF has provided input into the recovery strategy and action plan for Southern Residents focused on restoring Chinook salmon abundance and accessibility as a primary food resource necessary for the recovery of these whales, along with recommendations on reducing noise and

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contaminant impacts. DSF has a long standing commitment to protect Southern Residents, including as litigant before Canadian and American courts in cases concerning the legal protection of critical habitat for the Southern Residents.[1]

Georgia Strait Alliance ("GSA") is a registered charity with extensive membership in British Columbia. GSA collaborates with individuals, businesses, and government in pursuit of its mission: to protect and restore the marine environment and promote the sustainability of Georgia Strait, its adjoining waters, and communities. This includes protecting the diversity of wildlife and their habitat. For more nearly 30 years, GSA has been an advocate around protecting the habitat of Southern Residents from the negative impacts of pollution and the loss of their prey species, Chinook salmon. During the last few years, GSA has focused on securing the release of the final action plan (supported by over 800 GSA members who sent in letters), participated in consultations and dialogues around orca protection, took a lead at the recent DFO hosted orca symposium (sat on the advisory committee and let one of the workshop sessions), and has resumed advocacy to have open-net cage salmon farms removed and the industry transitioned to closed containment to protect all wild salmon species. GSA has been a litigant before Canadian and American courts in cases concerning the legal protection of critical habitat for the Southern Residents.[2]

Natural Resources Defense Council ("NRDC") is a not-for-profit membership organization, incorporated under the laws of the State of New York in the United States of America. They combine more than three million members and online supporters with the expertise of hundreds of scientists, lawyers, and policy advocates in the United States and across the globe. The NRDC works to safeguard the earth – its people, its plants and animals, and the natural systems on which all life depends. Their Oceans Program, which includes their work on the Southern Residents, fights to restore marine vitality by working to end overfishing, protect important marine areas, improve oceans governance, and combat emerging threats. For more than two decades, through litigation, national and international advocacy, and science-based policy development, they have helped lead the environmental community in preventing and mitigating the impacts of ocean noise pollution on marine wildlife. With their partners in the Orca Salmon Alliance, they have worked in the United States to improve prey availability for the Southern Resident population.

Raincoast Conservation Foundation ("Raincoast") is a charitable, non-profit organization comprised of scientists and conservationists who are empowered by their research to protect the lands, waters and wildlife of British Columbia. They use rigorous, peer-reviewed science, education, and community engagement to further conservation objectives. Raincoast operates a research lab at the University of Victoria, a field station, and research vessel. They collaborate with academic and government scientists to produce high-quality publications that further scientifically sound conservation decisions. For more than decade, Raincoast has used these tools to defend the critical habitat and lives of the Southern Residents. They have been a litigant before Canadian and American courts in cases concerning the application of

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[1] In the Federal Courts of Canada: *David Suzuki Foundation v Canada (Fisheries and Oceans)*, 2010 FC 1233; *Canada (Fisheries and Oceans) v David Suzuki Foundation*, 2012 FCA 40. In the United States District Court: *Inter Tribal Sinkyone Wilderness Council et al* v *National Marine Fisheries Service et al* (Northern District of California, Eureka Division, decided 25 September 2013).

[2] In the Federal Courts of Canada: *David Suzuki Foundation v Canada (Fisheries and Oceans)*, 2010 FC 1233; *Canada (Fisheries and Oceans) v David Suzuki Foundation*, 2012 FCA 40. In the United States District Court *Center for Biological Diversity et al v Robert D Lohn et al* (Western District of Washington at Seattle, decided 17 December 2003); In the United States District Court: *Washington State Farm Bureau et al v National Marine Fisheries Service et al* (Western District of Washington at Seattle, decided 20 December 2006); *Inter Tribal Sinkyone Wilderness Council et al* v *National Marine Fisheries Service et al.* (Northern District of California, Eureka Division, decided 25 September 2013).

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SARA to the Southern Residents, including the legal protection of critical habitat.[3] Raincoast has published a population viability analysis that evaluates and ranks threats to Southern Residents. They participate in federal fisheries planning processes to manage and recover Chinook populations, challenge projects that harm Southern Resident critical habitat, advocate for vessel regulations to reduce noise and disturbance, and advocate for vessel regulations to reduce noise and disturbance.

World Wildlife Fund Canada ("WWF-Canada") is a registered charity and Canada's largest international conservation organization, with the active support of hundreds of thousands of Canadians. WWF-Canada is committed to building a future where nature and people thrive. Over time, their work has evolved from protecting particular wildlife species and habitats to protecting life on Earth – including our own. Today, their work is about life, because everything they do is about securing the future of healthy, thriving ecosystems. And living, because the choices we make will decide that future – for us and for all species. WWF-Canada's work is grounded in science, using the best available data and knowledge to understand ecological connections, identify pressing issues and work with partners in pragmatic ways to develop effective conservation strategies. WWF-Canada has been working since 2011 to quiet the oceans for Southern Residents and other Pacific marine species. By working with government and industry, WWF-Canada has been advancing solutions to the increasing problem of underwater noise, while seeking strong protections and measurable reductions to the threats killer whales face.

II. Comments on the process for amending the Recovery Strategy

In April 2017, DFO identified the southwestern Vancouver Island critical habitat area described on page 59 and in Figures 4 and 5 of the Draft as a "habitat of special importance" to Resident Killer Whales in a CSAS Science Advisory Report.[4] The report stated that this area and a new area of importance to Northern Resident Killer Whales, "together with previously legally identified critical habitat, are necessary for the survival or recovery of [Resident Killer Whales]," and concluded that they "warrant consideration as additional critical habitat."[5]

On January 30, 2018, in their petition to the Minister of Fisheries and Oceans and Minister of Environment and Climate Change (the "Petition"), the Conservation Groups requested that the federal government immediately designate this additional area of critical habitat as part of an emergency order for the Southern Residents under s. 80 of SARA.

On May 24, 2018, the Minister of Fisheries and Oceans and Minister of Environment and Climate Change announced their finding under s. 80(2) of SARA that the Southern Residents face "an imminent threat to both survival and recovery" and released a summary of their imminent threat assessment. This obligates the Ministers to recommend, to Cabinet, that Cabinet make an emergency order to protect the Southern Residents, unless in their opinion equivalent measures have been taken under another Act of Parliament.[6] Critical habitat can be designated through an emergency order. Thus far, the Ministers have

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[3] In the Federal Courts of Canada: *David Suzuki Foundation v Canada (Fisheries and Oceans)*, 2010 FC 1233; *Canada (Fisheries and Oceans) v David Suzuki Foundation*, 2012 FCA 40; *Tsleil-Waututh Nation et al v Canada (Attorney General) et al*, decision pending. In the United States District Court: *Inter Tribal Sinkyone Wilderness Council et al* v *National Marine Fisheries Service et al* (Northern District of California, Eureka Division, decided 25 September 2013).

[4] Fisheries and Oceans Canada, 2017, *Identification of Habitats of Special Importance to Resident Killer Whales (Orcinus orca) off the West Coast of Canada*, DFO Can Sci Advis Sec Sci Advis, Rep 2017/011.

[5] Ibid at pp 3, 10.

[6] SARA ss. 80(2), 81.

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not recommended an emergency order. They have chosen instead to amend the Recovery Strategy through the ordinary, and longer, process established under sections 41, 43 and 45 of SARA.

In your letter of June 12, 2018, you set out a timeline for amending the Recovery Strategy: completion of the external review by July 11, 2018, a 60-day public comment period, and 30 days for the government to incorporate comments before posting the final document on the Species at Risk Public Registry. By email on June 27, 2018, Karen Leslie, Regional Manager for the Species at Risk Program at DFO, clarified for us that the government expects to take approximately a month for revisions and internal approvals between the conclusion of the external review on July 11 and the posting of the proposed amended Recovery Strategy for public comment, such that the government expects to post it on the Registry in late August 2018. Based on the timelines provided to us, with the subsequent 60-day public comment period and 30 days for the government to incorporate comments before posting the final version, the final document will be posted in the Registry in late November 2018.

Furthermore, the additional critical habitat will not be legally protected until the ministers make an order under s. 58(5) of SARA, within 180 days of the revised recovery strategy being posted in the Registry. This means that the additional critical habitat, which Southern Residents use year-round, might not be protected until late May 2019.

As a consequence of the government's choice to use the lengthier critical habitat designation and protection processes under SARA instead of an emergency order, these additional areas of critical habitat will not be designated until late autumn, and protections may not be in place until well into next year – even assuming all deadlines are met.

Under the circumstances, protection of all known areas of critical habitat is an urgent matter. It is therefore crucial that there not be any further delay in designating and legally protecting the additional areas of critical habitat. We urge the Minister of Fisheries and Oceans and Minister of Environment and Climate Change to use their power under s. 80 to recommend that these new critical habitat areas be immediately designated and protected through an emergency order, pending permanent designation of the area through the ordinary processes. Alternatively we urge them to issue a critical habitat protection order for these additional areas concurrently with their designation, rather than wait 180 days.

III. Comments on the contents of the Draft

A. Support for expansion of critical habitat

The Conservation Groups support the addition of the areas of critical habitat identified in the Draft, given their importance to Resident Killer Whales. In particular, the Petitioners note the strong evidence for the importance of the area on the southwest side of Vancouver Island to the prey aspect of critical habitat, as described in the supporting CSAS documents.[7] It is especially important that this key year-round foraging area be afforded legal protection as critical habitat in light of continued poor Chinook returns.

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[7] Ford, JKB et al, "Habitats of Special Importance to Resident Killer Whales (*Orcinus orca*) off the West Coast of Canada", Fisheries and Oceans Canada, Canadian Science Advisory Secretariat (CSAS), Research Document 2017/035, online at http://publications.gc.ca/collections/collection_2017/mpo-dfo/Fs70-5-2017-035-eng.pdf [Ford et al 2017]; Fisheries and Oceans Canada, "Identification of Habitats of Special Importance to Resident Killer Whales (*Orcinus orca*) off the West Coast of Canada", Fisheries and Oceans Canada, Canadian Science Advisory Secretariat (CSAS), Science Advisory Report 2017/011, online at http://waves-vagues.dfo-mpo.gc.ca/Library/40600385.pdf [DFO 2017].

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B. The 200m distance

The Draft identifies "Unimpeded physical space surrounding individual whales (minimum vessel approach distance 200m)" as an attribute of critical habitat, and lists "Vessels approach to whales (within 200m)" as a corresponding example of an activity likely to result in the destruction of critical habitat, under the category pf physical disturbance. While a 200 metre distance can reduce physical disturbance, it is well-established in the literature that small vessels *at least as far as 400 metres* can mask the echolocation signals essential to resident killer whale foraging, and can cause behavioural changes that result in diminished foraging activity – and larger vessels cause similar effects at greater distances.[8] The Draft's language does not comport with the best available science.

The Conservation Groups therefore recommend modification of the attribute to "Unimpeded physical space surrounding individual whales (minimum vessel approach distance at least 400m)", and, most importantly, the addition of a separate attribute concerning acoustic disturbance in general: "Acoustic habitat quality sufficient for unimpeded foraging and other life functions."

C. Prey availability

The current Recovery Strategy states, in the context of prey availability, that "[p]rey must be physically accessible to resident killer whales in critical habitat, yet killer whales and fishing vessels targeting the same prey compete with each other for space, particularly in fishing hotspots." The Draft appears to lack an equivalent acknowledgement that the prey availability aspect of critical habitat requires not only abundance of but also unimpeded access to prey. The Conservation Groups suggest that this or a similar statement be included, and expanded to acknowledge that, in addition to fishing vessels, other vessel types, such as commercial or recreational whale watching boats, can cause physical disturbance that affects prey availability.

D. The "bounding box approach"

The Draft contains the following statement at page 58:

> Critical habitat has been identified using the bounding box approach. This means that critical habitat is not composed of the entire area within the identified boundaries but only those areas within the identified geographical boundaries where the described biophysical features, attributes, and the functions they support occur [...]

This is a change from the existing recovery strategy, which would narrow the meaning of critical habitat. It is inconsistent with the meaning of "critical habitat" as that term is defined in SARA and interpreted by the Federal Courts, and it also appears to be inconsistent with the description of the "bounding box approach" in the supporting scientific documents.

Critical habitat as defined in SARA

[8] *E.g.*, USA, NMFS, Holt MM, "Sound exposure and southern resident killer whales (*Orcinus orca*): A review of current knowledge and data gaps" (2008) NOAA Tech Memo, NMFS-NWFSC-89; Lusseau, D et al, "Vessel traffic disrupts the foraging behavior of southern resident killer whales *Orcinus orca*" (2009) 6 *Endangered Species Research* 211; Noren, DP et al, "Close approaches by vessels elicit surface active behaviors by southern resident killer whales" (2009) 8 *Endangered Species Research* 179. *See also* Williams, R et al, "Effects of vessels on behavior patterns of individual southern resident killer whales *Orcinus orca*" (2009) 6 Endangered Species Research 199.

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SARA defines "critical habitat" as "the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species."[9]

SARA defines "habitat" for aquatic species as:

> spawning grounds and nursery, rearing, food supply, migration and any other areas on which aquatic species depend directly or indirectly in order to carry out their life processes, or areas where aquatic species formerly occurred and have the potential to be reintroduced.[10]

Critical habitat as defined by the Courts

The Federal Court has emphasized that s. 41(1)(c) of SARA "requires that the Minister identify in a recovery strategy document as much critical habitat as it is possible to identify at that time, even if all of it cannot be identified, and to do so based on the best information then available."[11]

The Federal Court has also confirmed, in a case concerning the critical habitat of Resident Killer Whales, that the identification of critical habitat under SARA requires an identification of both the specific geographic location and a description of the attributes within that area that area necessary to the survival or recovery of the species.[12]

Critical habitat as defined in the existing recovery strategy

The Draft's statement, which would narrow critical habitat to locations within the critical habitat area, is also a departure from the identification of critical habitat in the existing recovery strategy and in the understanding of critical habitat reflected in the research behind the proposed amendments. The existing recovery strategy identifies critical habitat in the manner required by SARA and the case law. It also states as one of its objectives: "Protect critical habitat for Resident Killer Whales and identify additional areas for critical habitat designation and protection".[13]

Critical habitat as described in the supporting research documents

The DFO research the amendments are responding to identifies "new areas for consideration as critical habitat" and proposes that the "areas" detailed in the report "are habitats of special importance that potentially meet the requirement for designation as critical habitat under the SARA".[14] It both "describe[s] the biophysical functions, features and attributes of these potential critical habitat areas" and "delineate[s] them geographically."[15] It characterizes the proposed change as a "proposed critical habitat extension".[16] Similarly, the summary version describes the "'[b]ounding boxes' [...] that encompass these areas of special importance", and concludes that "[t]he habitat areas identified [...] warrant consideration

---

[9] SARA s 2(1).
[10] SARA s 2(1).
[11] *Alberta Wilderness Association et al v Minister of the Environment*, 2009 FC 710 at para 25.
[12] *David Suzuki Foundation et al v Minister of Fisheries and Oceans*, 2010 FC 1233. Upheld by the Federal Court of Appeal: *Canada (Fisheries and Oceans) v David Suzuki Foundation*, 2012 FCA 40.
[13] Fisheries and Oceans Canada, "Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada", *Species at Risk Act* Recovery Strategy Series, Fisheries and Oceans Canada, Ottawa (2011) at page vi.
[14] Ford et al 2017 at pages 14, 21.
[15] *Ibid* at page 21.
[16] *Ibid* at page 23.

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as additional critical habitat", recognizing that it is not only their attributes but also the areas that should be designated under SARA. [17]

These research documents state that the "bounding box approach" identifies an area as a bounding box within which the critical habitat features are found.[18] In other words, it is properly understood as the boundary of the critical habitat area.

Implications of the Draft's approach to identification of critical habitat

The Draft proposes to recognize, and therefore protect, only the occurrences of attributes within areas, as opposed to areas and the attributes present within them. This is a step backwards from the current recovery strategy which would impede protection of critical habitat. Effective protection of critical habitat requires critical habitat to be identifiable so that users of the area can follow, and DFO can enforce, the protective provisions of SARA concerning critical habitat.

SARA provides many legislative tools to support conservation of a species' critical habitat. For these tools to work, it must be possible for both the government and users of critical habitat areas to know whether any given geographic location is within critical habitat. This includes the prohibition of the destruction of critical habitat (s. 58(1)), the requirement for the Ministers to make an order legally protecting critical habitat within 180 days of the recovery strategy being included in the public registry (s. 58(5)), the Governor in Council's ability to make regulations to protect critical habitat on federal lands (s. 59), the requirement to obtain permits for activities affecting critical habitat and activities that may result in destruction of critical habitat (ss. 73, 74, 77), and the requirement to ensure measures to avoid adverse effects of federally reviewable projects on critical habitat (s. 79).

Under the Draft's approach to critical habitat, critical habitat becomes an uncertain patchwork. Users of the area will not know, and DFO will have to constantly re-assess, whether the attributes are present at a given time in a given location. This makes the legal protection of critical habitat challenging for users to abide by and difficult or impossible for DFO to enforce. It also undermines the connectivity of critical habitat, and makes it difficult or impossible to manage cumulative effects on critical habitat as a whole.

The approach described on page 58 of the Draft could have the perverse result that an area is no longer critical habitat, and therefore loses legal protection, if its relevant attributes are being interfered with or destroyed. As described it the Draft, it appears that if degradation occurs that causes a location to lose its attributes temporarily or permanently, it is not critical habitat any longer, and not legally protected. As an example of the potentially absurd effect of this approach, if vessels are approaching Resident Killer Whales closer than 200m, the critical habitat attribute of 200m of unimpeded physical space is absent, with the result that the area is not critical habitat, and is not legally protected. This concept of critical habitat could have the effect of incrementally decreasing critical habitat as it becomes degraded, rather than protecting the area so that its functions and attributes are preserved, or if they are degraded, are restored.

The Petitioners recommend maintaining the existing approach to critical habitat identification

In short, legal protection of critical habitat under SARA and the enforcement of that protection require a clearly identifiable area, within which critical habitat's attributes cannot be destroyed. Critical habitat should be identified in the recovery strategy, and the subsequent order under s. 58(5), as including the existing and expanded critical habitat area, so that the attributes of critical habitat can be effectively

[17] DFO 2017 at pages 2, 10.
[18] Ford et al 2017 at page 21.

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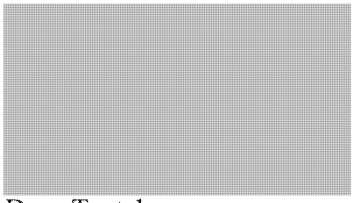
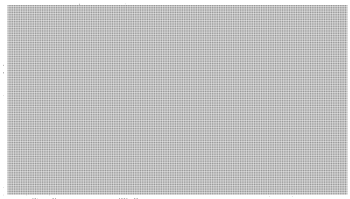
protected, preserved, and restored within that area. The amendment of the recovery strategy, which the Petitioners understood was intended to incorporate new areas of critical habitat based on updated research, should not simultaneously risk undermining the protection of critical habitat.

Sincerely,



Dyna Tuytel
Barrister & Solicitor



Margot Venton
Barrister & Solicitor

c. Jeffery Young and Scott Wallace, David Suzuki Foundation
Christianne Wilhelmson and Rachael Merrett, Georgia Strait Alliance
Michael Jasny, Natural Resources Defense Council
Misty MacDuffee, Paul Paquet and Ross Dixon, Raincoast Conservation Foundation
Hussein Alidina, World Wildlife Fund – Canada
The Honourable Dominic LeBlanc, Minister of Fisheries and Oceans
The Honourable Catherine McKenna, Minister of Environment and Climate Change and Minister Responsible for Parks Canada

s.16(2)

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Dozie, Juachi

From: Harber, Lee
Sent: July-16-18 12:18 PM
To: Davis, Neil
Cc: Leslie, Karen; Jones, Lisa Ann; Webb, Cheryl; Thomson, Andrew
Subject: Upcoming SRKW Advisory Group July 30: Materials / Updates
Attachments: SRKW Technical Briefing and Roundtable - Summary ReportV4 input for ODGs.docx; Draft Agenda for July 30 mtgV2.docx; SRKW Indigenous and Multi-stakeholder Advisory Group DRAFT TOR V4.docx; Approval Process and Timelines.docx

Hi Neil,

The next working group secretariat meeting is tomorrow morning. We should convene a call with DG's from TC and ECCC for later this week (perhaps Thursday after mtg with RDG).

Feedback from TC and ECCC have been incorporated into attached drafts, which include:

1. Summary Report June 22 on key themes (Q/A not ready yet)
2. Draft Agenda for July 30 (annotated)
3. Draft TOR with Table of existing committees
4. Approval Process & timelines + key considerations for RDG prior to meeting
5. Still waiting on status of Science presentation

We have a check-in with RDG on Wednesday to confirm proposed approach for July 30.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or

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TECHNICAL BRIEFING AND ROUNDTABLE ON SOUTHERN RESIDENT KILLER WHALE RECOVERY
JUNE 22, 2018
VANCOUVER, BRITISH COLUMBIA

SUMMARY: WHAT WE HEARD

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Meeting Objectives

- Provide an overview of the management efforts undertaken over the last several years.
- Review new measures in today's announcements, under the Whales Initiative.
- Engage in a roundtable discussion on the way forward, including a proposal for an Indigenous and multi-stakeholder advisory committee.

Opening Remarks:

Deputy Ministers:

- Acknowledged the importance of the protection and recovery of the Southern Resident killer whale (SRKW), the significant efforts that have been undertaken to date, including the Science Based review of threats to SRKW and the Symposium to convene diverse interests toward SRKW recovery, and the new measures that have been announced under the Whales Initiative.
- Emphasized that measures will need to go beyond immediate actions being announced but as an ongoing process of continually strengthening measures as more information and science becomes available.
- Working together with First Nations and stakeholders, including NGOs and industry to maximize the effectiveness of recovery measures being implemented.

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Roundtable: Key Themes from invited participants

1. Establishing a Forum for Engagement

- Overall recognition that the Southern Resident Killer Whale (SRKW) population is facing imminent threats to its survival and recovery and that protection and recovery actions will benefit from collaboration between agencies and multiple interests including Indigenous, NGO and industry interests.

- Strong endorsement for a SRKW Indigenous and multi-stakeholder advisory committee.

- This committee could facilitate valuable engagement with many groups – amongst each other and with the relevant federal departments.

- Effective requirements of an Advisory Committee should include:
    - Terms of Reference;
    - Clear direction on who and how actions will be achieved;
    - Trust built and established in a short time with members open about own information and goals;
    - Decision-makers who can effect change to be present on a regular basis at meetings.

- Effective plans to support SRKW recovery should include:
    - Clear objectives and goals as they relate to the needs of the SRKW;
    - Targeted levels of reduction among threats to recovering viable populations of SRKW
    - Immediate actions on threats that are well understood.
    - Adaptive management and longer term research on threats that are less understood.

2. Management Approach

- The management approach for SRKW recovery and protection needs to consider:

Short term vs. Long-term Measures

- Identify and implement short term/immediate actions

- Adaptive management (i.e., measures continually improved through science and knowledge) supports good policy development

- Adaptive management is a process that takes time and cannot be relied upon to produce immediate actions or measures (i.e., the associated timeline is too long to address recovery for the SRKW population)

- The federal government needs to provide direction on how to implement a requirement/action not just continue to seek justification or additional evidence regarding the effectiveness of recovery measures.

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Voluntary vs. Regulatory Measures

- Consider effectiveness and appropriateness of voluntary and/or regulatory actions;
- Voluntary cooperation on recovery measures that are mutually agreed upon may be implemented immediately or in the near-term. With cooperative monitoring and data sharing on the effectiveness of measures, voluntary actions may lend well to adaptive management including course correction if appropriate.
- Regulations take time to develop however may be more broadly applied with compliance promotion and enforcement, and would provide greater certainly among interests about recovery measures. With broader implementation, there would be improved data to inform adaptive management decisions

Targets and Measurable Results

- To be successful, identified measures/activities to reduce threats to SRKW viability must have: a) alignment with objectives for recovering SRKW population, b) clear reduction targets that reflect interactions among threats, and c) performance measures to indicate the effectiveness of measures.
- To inform adaptive action, identification of research needs and provision of science advice needs to be timely. It is important to think about the measures in place and how to measure the effects of these protections.

3. Monitoring and Enforcement

- There is general concern for how monitoring and enforcement will be implemented and made effective for SRKW recovery and protection. Clarification of how the new regulations will be enforced is also needed.
- Whale detection in real time is an important tool.

4. Indigenous Rights and Access

- Fisheries management decisions and SRKW recovery measures can have impacts on First Nations' ways of life, including fisheries for food, social and ceremonial purposes, and this should be carefully considered and respected so that access and rights are preserved.
- Long term planning is important, but to get buy in and support, short term recovery measures are necessary. To build the relationships with First Nations these short term measures need to be appropriate and meaningful.

5. Federal and Provincial Collaboration

- Federal and Provincial governments need to work together to coordinate respective recovery actions especially as it pertains to habitat protection and restoration for Chinook

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and Coho Salmon (e.g., water quality for juvenile salmon in river and out to sea; effects of logging and fire management)

6. Threat Abatement for SRKW

Actions to abate the threat of reduced prey availability need to:

- Be broad and consider all components, including harvest (e.g., at sea and in tidal waters), hatchery production, and habitat (e.g., juvenile Chinook and Coho Salmon survival related to water quality and habitat from freshwater to sea, spawning success including clear access to spawning grounds – protection and restoration)

- Consider existing initiatives around salmon survival and conservation (e.g., Wild Salmon Policy, efforts under the Oceans Protection Plan) and identify where efforts may be aligned.

- Need to consider the Chinook Salmon take from Alaska and discuss reductions on Alaska's catch to achieve greater escapement in Canada and more Chinook Salmon for SRKW.

7. Other Threats

- Vessel strikes should be considered as one of the threats to SRKW.

- Further development, investment and application of whale detection in real time is needed to help abate threats to SRKW (e.g., vessel strikes, acoustic/physical disturbance); clear goals and timeline are needed.

Actions to abate the threat of contaminants

- Sources and sinks of contaminants will be an important focus going forward, particularly in urban areas to understand impacts to SRKW habitat, prey availability, and toxics in prey.

- Sampling in the Fraser and other rivers will be a method of determining if there are adverse impacts to habitat and prey from waste water and runoff to the system; examining leachate from land fill areas will help determine if this is a source of contamination.

- The Disposal at Sea regulations under Canadian Environmental Protection Act serve as protective controls that are currently in place but it will be important to look at these closely to see if there are areas for improvement e.g. monitoring sites more closely to establish more protective limits and to ensure contaminants such as PBDEs are not increasing.

- Under the Chemicals Management Plan, contaminants known or suspected to be affecting whales, such as flame retardants (e.g. PBDEs), existing controls will be evaluated and strengthened

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Key Messages, Next Steps & Actions Committed

Key Messages

- Overall strong support received from participants for the establishment of an Indigenous and multi-stakeholder advisory committee
- Ensure preservation of Indigenous economic benefits, Indigenous rights and cultural practices.
- The Advisory Group must have a clear, well defined role.
- Short and long term goals are needed, but short term action must be a priority for immediate threat abatement.
- Need to identify what additional short term actions are required and who needs to be involved in implementing them.
- Identify when and where voluntary and/or regulatory measures are most effective.
- Decision makers need to attend meetings; be willing to listen.
- Science needs must be identified to ensure research is appropriately addressing questions within timelines for SRKW recovery.
- Enforcement activity related to management measures and new regulations needs to be clarified and clearly communicated.

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Next Steps & Actions Committed

- Based on input from participants during the roundtable discussion, a draft Terms of Reference will be developed and shared for input prior to the next meeting.

- A follow-up meeting with all participants will take place in 4-6 weeks' time to discuss:
  - draft Terms of Reference;
  - group membership, roles and responsibilities;
  - meeting frequency;
  - Milestones and deliverables;
  - Recent developments / progress on SRKW measures.
  - need for technical sub-committees / working groups to inform/support the advisory committee
    - identify existing SRKW-related initiatives that may align and provide support to the committee
- A summary of what was heard at this meeting will be provided to all participants.

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Annex A: Questions and Responses

1. What are the levels of threat reduction (in marine activities) needed to put SRKW recovery on a positive trajectory?
2. What will be the target needed for increased prey availability?
3. How will the new requirements under the Marine Mammal Regulations be enforced?
4. Under the Marine Mammal Regulations how will enforcement differ between whales and pinnipeds?
5. How will aerial surveillance be able to differentiate between a vessel approaching an SRKW or the other way around?

    - The surveillance officers on the aircraft will be able to determine the distance between the vessels and SRKW using the surveillance equipment on the aircraft. This information will be available to enforcement personnel should it be needed for further action.

6. In aerial surveillance programs, how far out to sea will they go to capture illegal high seas fishing? Question for DFO Conservation and Protection. (Christena Lalonde - Senior Program Officer)
7. What arrangements with other countries are in place for aerial surveillance?
   Canada does not currently have agreements in place with other countries (including the U.S.) for aerial surveillance.
8. As an incentive, can different regulation apply for Transient Killer Whales to Resident Killer Whales in context of whale watching?
9. Need a multipronged approach – need to look at it all and think that Alaska fishery is a huge threat; and right now with US government resistant to giving anything up, what is DFO doing to negotiate??
10. How will issues of prey (Chinook and Chum) availability and health be addressed with province of BC?
11. What engagement activities have taken place?
12. Is there an MOU between Federal and Provincial governments?
13. What money is being spent to increase Chinook Salmon abundance?
14. Regarding recreational finfish closures in Gulf Islands, are there any plans for direct observation to determine if the closure contributes to any change for SRKW success in the area?

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Annex B: Participant List

Sector	Name	Position	Affiliation	E-mail	Present
Indigenous representatives			UBC		X
			First Nations Summit		X
			FNFC		X
			FNFC		X
			FNFC		X
NGOs			Raincoast Conservation Foundation		X
			Georgia Strait Alliance		X
			WWF Canada		X
			David Suzuki Foundation		X
			Natural Resources Defence Council		X
			Vancouver Aquarium [Oceans Wise / CORI Team]		X
			Oceanwise		X
Shipping Industry			Port of Vancouver		Did not attend
			Port of Vancouver		X
			Shipping Federation of Canada		X
			Chamber of		X

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			Shipping		
			Canadian Ferry Association		X
			BC Ferries		X
			Sport Fishing Advisory Board		X
			BC Seafood Alliance		X
Whale Watching			Pacific Whale Watching Association		X
			Eagle Wing Tours (PWWA VP)		Phone
			Springtide whale watching and eco tours		Phone
			Vancouver Whale Watch		phone
Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca	X
Municipal Government					?
Federal government	Rebecca Reid	Regional Director General, Pacific Region	DFO	Rebecca.Reid@dfo-mpo.gc.ca	X
Federal government	Carmel Lowe	Regional Director, Science, Pacific Region Science	DFO	Carmel.Lowe@dfo-mpo.gc.ca	X
Federal government	Andy Thomson	Regional Director, Fisheries Management	DFO	Andrew.Thomson@dfo-mpo.gc.ca	X
Federal	Kevin	Associate	DFO	Kevin.Stringer@dfo-mpo.gc.ca	X

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government	Stringer	Deputy Minister			
Federal government	Sylvie Lapointe	ADM, Fisheries and Harbours Management	DFO	Sylvie.Lapointe@dfo-mpo.gc.ca	X
Federal government	Michelle Sanders	Director, Clean Water Policy	TC	Michelle.Sanders@tc.gc.ca	X
Federal government	Megan Nichols	Director General, Environmental Policy	TC	Megan.Nichols@tc.gc.ca	X
Federal government	Michael Keenan	Deputy Minister	TC	Michael.Keenan@tc.gc.ca	X
Federal government	Yvette Myers	Executive Director, Oceans Protection Plan	TC	Yvette.Myers@tc.gc.ca	X
Federal government	Marc D'iorio	DG, Industrial Sectors, Chemicals, and Waste Directorate	ECCC	Marc.diorio@canada.ca	X
Federal Government	Cecilia Wong	Senior Ecosystem Scientist	ECCC	cecilia.wong@canada.ca	X
Federal Government	Mary-Ann Spicer	Manager, Chemicals Management Division	ECCC	mary-ann.spicer@canada.ca	Phone
Federal Government	Christopher Marshall		ECCC	christopher.marshall@canada.ca	Phone
Federal Government	Kendra Moore	Fisheries and Aquaculture Management	DFO	Kendra.moore@dfo-mpo.gc.ca	Phone
Federal Government	Robert Dick	Regional Director	TC	Robert.Dick@tc.gc.ca	X

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Annex A – Existing Working Groups related to RWK

Southern Resident Killer Whale Indigenous and Multi-stakeholder Advisory Group Terms of Reference

(DRAFT July 16, 2018)

1. BACKGROUND

As identified at the October 2017 Symposium for the Southern Resident killer whale (SRKW) and the recent *Whales Initiative* technical briefing and roundtable discussion on June 22, 2018, this Advisory Group has been established by the federal departments of Fisheries and Oceans Canada, Transport Canada, and Environment and Climate Change Canada to bring together Indigenous groups, multiple stakeholders, and implicated jurisdictions to facilitate communication and coordination of activities to recover SRKW. The purpose of this group is to provide a forum for information sharing and coordinating of advice on the implementation of recovery measures to address threats to SRKW.

2. PURPOSE AND SCOPE

The main objectives of the working group will be to:

- Provide a forum for the participants to discuss actions underway and planned by federal departments and others to protect SRKW, and to allow participants to provide advice on planned recovery actions and to share information to help inform government decision-making.
- Promote dialogue and improve shared understanding of the complexities of SRKW recovery, shared responsibilities, and respective authorities of Advisory Group participants to reduce SRKW threats.
- Identify opportunities for collaboration and partnership that can advance the collective implementation of the recovery measures identified in the Species at Risk *Action Plan for Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada* (2017) and Oceans Protection Plan *Review of the Effectiveness of Recovery Measures for Southern Resident Killer Whales* (2017), and the measures announced under the federal *Whales Initiative* on June 22, 2018 to promote recovery of the species.

Discussion questions for Advisory Group: Are there specific milestones or deliverables that you would like to identify under these objectives?

3. GOVERNANCE AND MEMBERSHIP

The Indigenous and Multi-stakeholder Advisory Group will consist of twenty-one members (Annex A) from various Indigenous and stakeholder groups: indigenous communities (5), NGOs (6), the shipping and marine transportation, fishing, and whale watching sectors (7), BC Government (1), Metro Vancouver Regional District.

Discussion question for Advisory Group: Is there interest is having a non-federal co-chair?

The Advisory Group will be chaired by the Regional Director General of Fisheries and Oceans Canada, with ex-officio participation of senior officials from Transport Canada and ECCC.

The federal departments may establish a scientific advisory body to provide advice to the Advisory Group on implementing and monitoring recovery measures to mitigate threats. The federal departments will seek the advice of the Advisory Group on the establishment of the scientific advisory body.

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Discussion question for Advisory Group: Is there interest in having a science sub-advisory group? If so, what type of function would this group serve?

4. LINKAGES

The Advisory Group may be informed and advised by other various and already established SRKW working groups and committees, which are generally threat-based. A list of other currently active groups is provided at Annex A.

5. MEETINGS

The Advisory Group will meet up to four times per year, or more frequently, if needed. Teleconferencing and video conferencing will be used where possible to minimize travel demands.

Fisheries and Oceans Canada will provide secretariat services to support meeting delivery and the preparation of summary meeting notes.

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Annex A – Existing Working Groups related to RWK

Working Groups/Committees			
Name of engagement activity	**Description**	**Purpose**	**Contact Person**
SRKW committee	Developed from need to have more engagement with First Nations and stakeholders around management measures for SRKW to reduce threat of prey availability and secondarily disturbance	ToR being drafted; but generally provide for engagement with First Nations and Stakeholders to discuss and get input on management actions for SRKW related to abating threat of reduced prey availability	
Canada-United States			
Toxics Working Group	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. Toxics working group formed as one of the three to support the Task Force.	Identify, research, and analyze potential actions for consideration.	
Vessels and Noise Working Group	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. The Working Group on Vessels and Noise reports to the Washington State Southern	To develop recommendations on actions to reduce physical and acoustic disturbance impacting SRKW.	

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Annex A – Existing Working Groups related to RWK

	Resident Killer Whale Task Force		
Prey Working Group	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. Prey working group formed as one of three to support the Task Force.	Identify range of actions to be considered to abate threat of reduced prey availability within Habitat, Harvest, Hydro, Hatcheries, Predations; prioritize, identify conflicts and synergies and deliver refined set of actions to Task Force to be considered in final report due Nov.1 2018	
Salish Sea Transboundary Ecosystem Indicators (TBI) Project	The TBI project is led by Environment and Climate Change Canada (ECCC) and the United States Environmental Protection Agency (US EPA) to characterize the state of ecosystem health in the Salish Sea (overlaps with SRKW critical habitat) and convene subject experts to identify threats and responses to concerning trends. Ten indicators are tracked including SRKW abundance, toxics in the food web and chinook abundance. A public facing website supports communication of project outcomes.	The TBI project is a commitment under the ECCC - US EPA Statement of Cooperation to share information and foster collaboration on priority issues in the Salish Sea ecosystem.	
DFO/ National Oceanic and Atmospheric Administration prey working group	Group that has organized workshops to review and understand the science on prey availability for SRKW and identify potential management action.		
SRKW and Underwater Vessel Noise			

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Annex A – Existing Working Groups related to RWK

Enhancing Habitat Cetacean Observation (ECHO) Advisory Working Group (AWG)	The ECHO AWG brings together a broad spectrum of interests from Canada and US to address threats to at-risk whales.	The role of the AWG is to provide the ECHO program management team with input, advice and recommendations during the development and execution of the program's projects and initiatives.	
Enhancing Habitat Cetacean Observation (ECHO) Vessel Operators Committee (VOC)	The ECHO VOC was established in December 2016 to provide the ECHO Program team with advice, support and guidance pertaining to potential mitigation options that may directly impact the shipping industry.	To bring key stakeholders together to develop mitigation options to reduce underwater vessel noise	
Ship Noise Mitigation Risk Assessment	The Ship Noise Mitigation Risk Assessment was commissioned by Transport Canada to assess and quantify the navigation safety risks associated with introducing or implementing potential mitigation measures to address underwater noise in the Salish Sea.	The purpose of the stakeholder engagement sessions was to present the results of the TC commissioned risk assessment, and seek feedback from key industry stakeholders, First Nations and US Tribes in the Salish Sea region.	

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s.21(1)(a)

s.21(1)(b)

SRKW multi-stakeholder and Indigenous Advisory Group - Timeline and Approval Process

	Item	Dept.	Deadline
1	Secretariat (DFO, TC, ECCC) review of: • Draft Terms of Reference • June 22 meeting summary report & assigned questions • Meeting Agenda	All departments	July 17 (Tuesday)
2	Check-in with RDG Pacific Region	DFO Pacific Region	Wednesday July 18
3	Call with interdepartmental executive group (DG / Director – level)	Chair: Andy Thomson ECCC: Marc D'Iorio DFO: Cheryl Webb TC: Michelle Sanders (NHQ) / Yvette Myers (PAC)	Thursday July 19?
4	Review of meeting materials by respective dept. senior officials i.e. DG level	All departments	Friday July 20 *(4 days for approvals at DG level)*
5	Finalize materials and send to meeting package to participants	DFO Pacific Region	July 24 *(week in advance of meeting)*
6	Pre-brief with RDG Pacific Region	DFO Pacific Region	July 27 (Friday)
7	SRKW Indigenous and Multi-Stakeholder Advisory Group Meeting	All departments	Monday July 30

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SOUTHERN RESIDENT KILLER WHALES
INDIGENOUS AND MULTI-STAKEHOLDER ADVISORY GROUP

AGENDA - ANNOTATED

Monday July 30, 2018 10:00 am- 12:00 pm
Location: 401 Burrard St. Room
2nd Floor, Boardroom C and D

Time	Agenda Item	Objective & Reference Materials	Presenter(s)
10:00AM – 10:25 *(25 mins)*	**Welcome, Opening Remarks & Introductions** • Opening Remarks • Review Agenda ○ Ratify Summary Report from first meeting	**Materials:** ○ **Draft Agenda** (distributed in advance of the meeting) ○ **Speaking points** for RR on: 1) key themes from summary report and 2) status of questions from first meeting (Lead: Lee w/ input from ECCC and TC)	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region

	• **Updates / Recent Developments**
	  ○ Update on MMR's
	  ○ Update on New Critical Habitat: Amended RKW recovery strategy
		Objective: Information Sharing
		○ **Speaking Point** for RR on MMR's and RKW new Critical Habitat updates.
		○ **Hand-out's** for group i.e. media lines and news release on MMRs
		(Communications products ready)	

10:15AM - 11:00AM *(35 mins)*	**Review draft Terms of Reference** • Key questions to steer discussion and feedback • Discussion on potential Science sub-advisory group	**Materials:** • **Draft ToR** to be sent to participants in advance of the meeting with key questions to frame the discussion. • **Table** for RR with key questions for the group.	All participants
11:00AM - 11:30AM *(30 mins)*	**Presentation on Current Science Activities** • Overview of science activities underway that are supporting SRKW recovery	**Objective:** Information Sharing • **PowerPoint Presentation**	DFO Science
11:30AM - 11:50AM *(20 mins)*	**Roundtable Discussion on Forward Agenda for Advisory Group** • Identify priority areas for information and discussion at future meetings.	**Discussion** Priorities areas for future discussion: 1. Identified by Group on June 22: • Monitoring and Enforcement of recovery measures • Immediate vs. long-term recovery	**All participants**

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		measures. 2. Other important areas for consideration: • Lateral Displacement in Strait of Juan de Fuca / Vessel Slow Down in Haro Strait • Contaminants (ECCC?) • Prey (DFO updates	
11:50AM – 12:00PM *(10 mins)*	**Closing Remarks** • Next Steps • Action Items	**Objectives** • Identify next steps & action items	**Chair: Rebecca Reid** Regional Director General, DFO – Pacific Region

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Mbarushimana, Jenny

From: Jones, Lisa Ann
Sent: July-17-18 10:22 PM
To: Brekke, Heather; Shaikh, Sharlene
Subject: RE: Intention of BC to provide comments back on Critical Habitat for Northern and Southern Killer Whale

Hi both,

Have taken a look over the comments that are provided thus far and do not see any concern for having to change the document or needing to contact science. I was also texting with Christie and she agrees.

Most of the comments are about management (how to input, where to input, what will be input as management action etc.). I think we are able to answer these questions from the CH guidelines and for the management action related comments to reiterate that the identification and protection of CH does not address management activity.

Not sure what the additional messages are but from what we have seen so far I think we are OK.

I guess we still need to wait for those remaining messages and official response to come in before we can move forward – hopefully there is not too much more.

Cheers
Lisa

From: Brekke, Heather
Sent: July-17-18 3:43 PM
To: Jones, Lisa Ann; Shaikh, Sharlene
Subject: FW: Intention of BC to provide comments back on Critical Habitat for Northern and Southern Killer Whale
Importance: High

From: Stefanyk, Karen ENV:EX [mailto:Karen.Stefanyk@gov.bc.ca]
Sent: July-17-18 3:41 PM
To: Leslie, Karen
Cc: Brekke, Heather; Webb, Cheryl; Dale, Alec R ENV:EX
Subject: RE: Intention of BC to provide comments back on Critical Habitat for Northern and Southern Killer Whale

Afternoon Karen,

Apologies in the delay, I've been tied up in meetings the majority of the day. I have attached the comments BC would like to submit with the caveat there are a few additional messages that will have to be sent along with our official response to the document. I am hoping to still get those solidified for tomorrow morning.

I have also left you a voice mail with further context. Happy to chat more and thank-you for your patience and collaboration.

Regards,

Karen

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From: Leslie, Karen [mailto:Karen.Leslie@dfo-mpo.gc.ca]
Sent: Tuesday, July 17, 2018 10:52 AM
To: Stefanyk, Karen ENV:EX
Cc: Brekke, Heather; Webb, Cheryl
Subject: FW: Intention of BC to provide comments back on Critical Habitat for Northern and Southern Killer Whale

Hi Karen –

I am just following up on Cheryl's behalf, and my voicemail earlier this morning. We are moving quickly through our regional approvals process this week – when would BC be able to submit comments? Would you be able to provide a pre-approved version of the submission that we could review and use to revise the document in the interim?

Please feel free to call today and discuss further,
Karen

Karen Leslie
Regional Manager, Species at Risk Program
Fisheries and Oceans Canada / Government of Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

Gestionnaire régional, Programme des espèces en péril
Pêches et Océans Canada / Gouvernement du Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

From: Stefanyk, Karen ENV:EX [mailto:Karen.Stefanyk@gov.bc.ca]
Sent: Monday, July 16, 2018 4:59 PM
To: Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Subject: Intention of BC to provide comments back on Critical Habitat for Northern and Southern Killer Whale

Dear Ms. Webb,

The Province of British Columbia fully intends to provide comments back on the amended Recovery Strategy for Northern and Southern Resident Killer Whales, specifically on Section 7 (Critical Habitat), as requested in your June 12, 2018 letter.

Apologies for the tardiness as I realize comments closed July 12, 2018. We have a submission ready it is currently in the review process and I hope to submit, on behalf of the Province in the next few days.

Thank-you for your collaboration and patience. Please contact me if you have any questions and/or concerns.

Karen Stefanyk, R.P.Bio.
Recovery Planning Coordinator
Ecosystems Branch| BC Ministry of Environment and Climate Change Strategy
Phone Number: 778-698-5188 | Email: Karen.Stefanyk@gov.bc.ca
Species & Ecosystems at Risk
Recovery Planning
Recovery Planning Documents
Join in the conversation on species-at-risk legislation in B.C. http://engage.gov.bc.ca/bcspeciesatrisk/

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Brekke, Heather
Sent: July-17-18 8:20 AM
To: Jones, Lisa Ann
Subject: FW: Intention of BC to provide comments back on Critical Habitat for Northern and Southern Killer Whale

Fyi, standby...

From: Leslie, Karen
Sent: July-17-18 7:53 AM
To: Webb, Cheryl
Cc: Brekke, Heather
Subject: RE: Intention of BC to provide comments back on Critical Habitat for Northern and Southern Killer Whale

[redacted]

Karen Leslie
604-666-0395

From: Webb, Cheryl
Sent: 2018–July-16 5:03 PM
To: Leslie, Karen
Subject: FW: Intention of BC to provide comments back on Critical Habitat for Northern and Southern Killer Whale

[redacted]

From: Stefanyk, Karen ENV:EX [mailto:Karen.Stefanyk@gov.bc.ca]
Sent: Monday, July 16, 2018 4:59 PM
To: Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Subject: Intention of BC to provide comments back on Critical Habitat for Northern and Southern Killer Whale

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Apologies for the tardiness as I realize comments closed July 12, 2018. We have a submission ready it is currently in the review process and I hope to submit, on behalf of the Province in the next few days.

Thank-you for your collaboration and patience. Please contact me if you have any questions and/or concerns.

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Karen Stefanyk, R.P.Bio.
Recovery Planning Coordinator
Ecosystems Branch| BC Ministry of Environment and Climate Change Strategy
Phone Number: 778-698-5188 | Email: Karen.Stefanyk@gov.bc.ca
Species & Ecosystems at Risk
Recovery Planning
Recovery Planning Documents
Join in the conversation on species-at-risk legislation in B.C. http://engage.gov.bc.ca/bcspeciesatrisk/

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Geographic information (p. 58)

Four critical habitat areas have been identified for Resident Killer Whales, described in section 7.1.1. ACritical habitat has been identified using the bounding box approach was used to geographically delineate critical habitat. Under this approach, critical habitat, which includes. This means that critical habitat is not composed of the entire area within the identified boundaries but only those areas within the area within the identified geographical boundaries where the described biophysical features, attributes, and the functions they support occur (Ford et al. 2017)., as described in Table 4 and defined by the coordinates in Appendix D. The critical habitat's biophysical functions, features, and attributes are described below and summarized in Table 4, and are defineddelineated by the geographic coordinates in Appendix D.

Comment [TDV1]: I felt this sentence was still ambiguous, and found it confusing that CH would "include the geographical boundaries" instead of the area within those boundaries.

Comment [TDV2]: Again, I don't think you can say that the functions, features and attributes are "defined" by geographic coordinates. Instead, they occur within an area delineated by coordinates.

Figure 4 (p. 60). Critical habitat areas identified for Northern Resident Killer Whales. Critical habitat is defined byas the area within not composed of the entire area within the identified geographic boundaries but only those areas within the identified geographical boundaries where the described biophysical features and the functions they support occur, as described in Table 4.

Figure 5 (p. 61). Critical habitat areas identified for Southern Resident Killer Whales. Critical habitat is defined byas the area within not composed of the entire area within the identified geographic boundaries but only those areas within the identified geographical boundaries where the described biophysical features and the functions they support occur, as described in Table 4.The hatched areas in the transboundary waters of southern BC and off southwestern Vancouver Island are the critical habitat areas in Canadian waters for Southern Resident Killer Whales, as designated under SARA. The hatched area in the transboundary waters of northern Washington State is designated as Southern Resident Killer Whale critical habitat under the U.S. ESA.

7.3 (Activities likely to result in the destruction of CH), second paragraph (p. 64-65)

The following examples of activities likely to result in the destruction of critical habitat are based on known human activities that are likely to occur in and around critical habitat and would result in the destruction of critical habitat if unmitigated. These activities may impact critical habitat regardless of whether or not the whales are present within the area, dependent on the activity and the feature, function, or attribute affected by that activity. The list of activities is neither exhaustive nor exclusive and has been guided by the threats described in section 4 of this recovery strategy. The absence of a specific human activity does not preclude or restrict the Department or Parks Canada Agency's ability to regulate that activity under SARA. Furthermore, the inclusion of an activity does not result in its automatic prohibition and does not mean the activity will inevitably result in destruction of critical habitat. Every proposed activity must be assessed on a case-by-case basis and site-specific mitigation will be applied where it is reliable and available. Where information is available, thresholds and limits have been developed for critical habitat attributes to better inform management and regulatory decision

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making. However, in many cases knowledge of a species and its critical habitat's thresholds of tolerance to disturbance from human activities is lacking and must be acquired.

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Khanna, Sukriti

From: Brekke, Heather
Sent: July-17-18 2:58 PM
To: Fershau, Jonathan; Jones, Lisa Ann; Shaikh, Sharlene
Subject: FW: SRKW CH consultation letters
Attachments: 2018-001-01293.pdf; 2018-001-1303.pdf; 1839_001.pdf; 2018-001-01314.pdf; FW: MCU Request - referall of comments on Northern and Southern killer whales

Importance: High

fyi

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: July-17-18 2:30 PM
To: Brekke, Heather
Subject: SRKW CH consultation letters
Importance: High

Attachments start at page 161

Hi Heather. We've received the attached letters. We have just had a query from Ottawa correspondence asking if they can direct all these letters to Pacific SARA (see attached email). I see in my inbox that Karen Leslie has confirmed that all letters on this topic can be referred directly to Pacific SARA.

I am confirming with Ottawa correspondence exactly what that looks like. I think it will mean that all the letters will be forwarded to you for a direct response (no PRMCU involvement).
Candace

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: Monday, July 16, 2018 12:29 PM
To: Grout, Jeff
Subject: Draft_Reply_2018-001-01293.docx
Importance: High

Hi Jeff.

We're looking for your approval on this draft response **by 12:30pm Tuesday, but sooner if at all possible.** Please note that we have drafted this reply in response to a number of letters re: timing of External Review consultation. See four incoming letters attached.

Please use track changes to insert any necessary edits in the attached document, and FORWARD the document to XPAC PRMCU.

Your review should also include technical accuracy and consistency with policy direction.

If you think someone else in Pacific Region or in Legal Services must approve and they aren't on our approval list, **please advise us ASAP and we will forward the documents for their approval**.

Thanks,

Alison

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****Please direct all e-mails regarding ministerial correspondence to XPAC PRMCU.****

Candace McGuire, Heather Fowlie & Alison Jacques

Managers, Pacific Region Ministerial Correspondence Unit
Fisheries and Oceans Canada/Government of Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

Gestionnaires de la correspondance ministériel
Pêches et Océans Canada/Gouvernement du Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

Pages 154 to / à 157
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

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Fisheries and Oceans Canada
Correspondence Routing Slip

Fiche d'acheminement de correspondance
Pêches et Océans Canada

CLASSIFICATION
GCCMS #: 20##-###-#####
EKME #: #######

To: / Pour: Catherine Blewett

Date:

Object: **TITLE**
Objet: **TITRE**

From / De: Name of Regional Director/Area Director, Title

Via: Name of Regional Director General, Title

Additional approvals:
Autre(s) approbation(s):

Name
Title

☐ Material for the Minister / Documents pour le Ministre

☐ Your Signature / Votre signature

☐ Information

Screen: / Filtre: The Department has assessed this issue in full.

- ☐ It contains no reference to matters covered by the screen relating to J.D. Irving Limited.
- ☐ It contains matters referenced in the screen relating to J.D. Irving Limited, but in our view does not engage the screen.
- ☐ In our view, the screen relating to J.D. Irving Limited should be engaged.

Remarks: / Remarques: This briefing note was developed in consultation with the following regions/sectors: [please list who was consulted internally]

Distribution: *Please indicate name of people to receive a copy and if prior or following the DM approval. (Remove if no Distribution is required)*

Drafting Officer/ Rédacteur:

NAME (TEL #)/ Director / admin initials

Comment [D3]: Complete. If a note is Protected B, Protected Solicitor Client Privilege, Confidential or Secret, please delete the EKME line. These types should not be saved in the system.

Comment [D4]: Do not date this section. This is to be dated once all parties have approved the note.

Comment [D5]: **NEW**
Please note this section is for the branch who is the lead in developing the Memo. The RD/AD's name and title should be typed in full. For example: Andrew Thomson, Regional Director, Fisheries Management

Comment [D6]: **NEW**
Please note: the RDG's name and title should be typed in full. For example: Rebecca Reid, Regional Director General, Pacific

Comment [D7]: Please list any ADM's from the sectors in NHQ that provided significant input.

It is the discretion of your RD/AD to determine if input is significant or not.

Always use signature blocks with the name and title underneath.

Comment [D8]: Select one with an X

Comment [D9]: This section should include any AD/RD/Director's who provided input or assisted in the development of this Memo.

Please ensure each individual listed in this section has initialled beside their name prior to bringing the docket up to the RDGO.

Comment [D10]: Please list any individuals who should receive a copy once approved.
ADM's may be included in this section as an FYI.
This is a great tool to use if you need to inform individuals about a docket, but whom do not need to be consulted during the development of the note.

Comment [D11]: Please complete this section in the same format provided.
The Director approving the Memo will sign/initial here by their name.

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Wilkinson, Davida

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: July-17-18 2:30 PM
To: Brekke, Heather
Subject: SRKW CH consultation letters
Attachments: 2018-001-01293.pdf; 2018-001-1303.pdf; 1839_001.pdf; 2018-001-01314.pdf; FW: MCU Request - referall of comments on Northern and Southern killer whales

Importance: High

Hi Heather. We've received the attached letters. We have just had a query from Ottawa correspondence asking if they can direct all these letters to Pacific SARA (see attached email). I see in my inbox that Karen Leslie has confirmed that all letters on this topic can be referred directly to Pacific SARA.

I am confirming with Ottawa correspondence exactly what that looks like. I think it will mean that all the letters will be forwarded to you for a direct response (no PRMCU involvement).
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Sent: Monday, July 16, 2018 12:29 PM
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Importance: High

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Please use track changes to insert any necessary edits in the attached document, and FORWARD the document to XPAC PRMCU.

Your review should also include technical accuracy and consistency with policy direction.

If you think someone else in Pacific Region or in Legal Services must approve and they aren't on our approval list, **please advise us ASAP and we will forward the documents for their approval.**

Thanks,

Alison

****Please direct all e-mails regarding ministerial correspondence to XPAC PRMCU.****

Candace McGuire, Heather Fowlie & Alison Jacques

Managers, Pacific Region Ministerial Correspondence Unit
Fisheries and Oceans Canada/Government of Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

Gestionnaires de la correspondance ministériel

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Pêches et Océans Canada/Gouvernement du Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

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2018-001-01293

Port Renfrew Chamber of Commerce

July 6, 2018

Attention: Honourable Dominic LeBlanc
Minister of Fisheries and Oceans
Ottawa, Canada

Copied to : Premier John Horgan, MLA
Mike Hicks, Electoral Area Director (Juan de Fuca)
Bruce Fogg Executive Assistant (Constituency) Premier John Horgan, MLA

Dear Minister LeBlanc,

In response to the proposed closures for critical habitat protection of the southern resident killer whales, the Port Renfrew Chamber of Commerce expects and demands that DFO properly consults directly with our community at a time which is convenient for our community. The timing of the current consultation period exhibits the huge lack of sensitivity and lack of respect to the hard working people of Port Renfrew and the other coastal communities which will be severely impacted by the proposed critical habitat protection area and associated closure.

The closures, if implemented as currently proposed, will decimate our community and the businesses associated with the sports fishing industry. Critical Habitat protection is only one step in protecting the southern resident killer whales. What is required is open and transparent consultation with Port Renfrew and the other coastal communities in order to create a viable plan to protect the species and at the same time preserve the economic viability of our communities.

Port Renfrew and the other communities of Bamfield, Ucluelet and Tofino have not been directly consulted and we expect and demand to be involved in the process prior to any future decision or further closures for critical habitat designations in this area.

Sincerely,
Karl Ablack
Vice President

Port Renfrew Chamber of Commerce
P.O. Box #39 Port Renfrew,
British Columbia V0S 1K0
renfrewchamber@gmail.com
www.renfrewchamber.com

Dept

2018-001-1293 ABLACK JUL 26 3934501

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Minister / Ministre (DFO/MPO)

From: Karl Ablack [redacted]
Sent: July-06-18 6:19 PM
To: Minister / Ministre (DFO/MPO)
Cc: 'Horgan.MLA, John'; 'directorjdf'; 'Fogg, Bruce PREM:EX'
Subject: Proposed Pacific Coast Critical Habitat Closure
Attachments: Port Renfrew Chamber Letter to DFO.docx

Attention: Honourable Dominic LeBlanc
Minister of Fisheries and Oceans
Ottawa, Canada

Copied to : Premier John Horgan, MLA
Mike Hicks, Electoral Area Director (Juan de Fuca)
Bruce Fogg Executive Assistant (Constituency) Premier John Horgan, MLA

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Port Renfrew and the other communities of Bamfield, Ucluelet and Tofino have not been directly consulted and we expect and demand to be involved in the process prior to any future decision or further closures for critical habitat designations in this area.

Respectfully,

Karl Ablack
Vice President
Mobile: [redacted]

Port Renfrew Chamber of Commerce

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Port Renfrew Chamber of Commerce
P.O. Box #39 Port Renfrew,
British Columbia V0S 1K0
renfrewchamber@gmail.com
www.renfrewchamber.com

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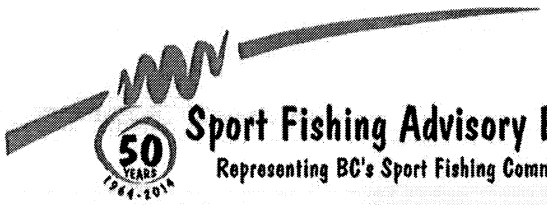
s.19(1)



2018-001-01303

July 10, 2018
Hon. Dominic LeBlanc
Minister of Fisheries, Oceans and the Canadian Coast Guard
Parliament Buildings,
Ottawa

By e-mail: dominic.leblanc@parl.gc.ca

Dear Minister

On behalf of the 300,000 or more people who annually purchase a Tidal Waters Sport Fishing Licence, I wish to register the Sport Fishing Advisory Board's profound concern about the timetable associated with the proposal to add two further areas to those already designated as critical habitat for Southern and Northern Resident Killer Whales.

The current 30-day External Review Process is taking place when indigenous, recreational and commercial salmon fisheries have entered their busiest time of year. I do not presume to speak for the other sectors but the imposition of consultation deadlines during the peak salmon fishing season is both unfair and unrealistic. This is the time of year when anglers are widely dispersed while carrying on the social activity that makes the tidal recreational fishery the largest and most valuable part of the West Coast fishing economy. It simply has been impossible for the recreational sector to communicate with anglers and gather the data necessary to provide informed comments.

Similar limitations apply with respect to the proposed 60-day public comment period starting in August. It is the SFAB's submission that the process needs to be slowed down so that there can be effective examination of the rationale being put forward with respect to the two new critical habitat designations as well as completion of the additional research necessary to assess the relationship between these additional areas and others known to be utilized by Northern and Southern Resident Orca but not yet suggested for similar designation.

In their CSAS paper on **"Habitats of Special Importance to Resident Killer Whales (*Orcinus orca*) off the West Coast of Canada",** Ford et al conclude that the two areas now in question are of "special importance to Resident Killer Whales". They suggest that they "potentially warrant identification as additional critical habitat" under SARA. Their use of the term "potentially" invites debate. Is it not equally valid to suggest that the proposed areas "potentially" may not warrant such identification? What is the relationship between the three terms "important habitat, "Critical Habitat" and "primary habitat" that they use in the same paragraph on page 16 of their paper? At another point they argue that "portions" of the proposed new areas "are required to meet the population and distribution recovery objectives of these populations". They do not seem to have considered the social and economic implications of applying the critical habitat designation to a large area, when according to their own words, only "portions" are required. Given the paper's acknowledgement of reservations

Gerry Kristianson, SFAB Chair
[redacted]
tel/fax: [redacted] e-mail: [redacted]

Dept

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about the accuracy of its data, it seems appropriate to suggest that instead of moving prematurely it would be best to continue the Recovery Strategy recommendation of further year-round surveys so that definitive, sensible science-based proposals can be made. This process could then take advantage of the considerable local knowledge possessed by indigenous, recreational and commercial harvesters about areas which the scientists admit are "difficult to access and not conducive to conventional small boat field studies."

Having spent at least 400 sport fishing days on the north and west side of Haida Gwaii over a 30-year period, I cannot dispute the assertion that Northern Resident KW frequent the area. But it must be noted that in some respects the importance of the area around Langara Island has been identified because observation of the whales has been facilitated by the recreational fishing service providers in this area while comparable work has not gone on elsewhere. Where is the evidence that this area deserves the critical habitat designation more than other places where these highly mobile creatures can be found at various times of year but where the same level of observation has not taken place? The paper states that "there is no other known area within the range of the population that is frequented as often and regularly by NRKW groups as western Dixon Entrance". What about unknown areas? It also says the whales "have seldom been observed to travel or forage west of Langara Island, hence this area has not been included in proposed critical habitat." The term "seldom observed" hardly justifies a scientific conclusion with significant implications. In fact anglers have observed whales travelling and foraging on the west side of Haida Gwaii, which shows the need for further research before accepting the proposed designation.

While we have been assured there is no direct connection between the current review and recent fishery closures in previously designated areas, it needs to be understood that the recreational sector's experience with the process by which closures are determined has not been positive. The unilateral decision to extend the closed area in Juan de Fuca Strait beyond that which originally was proposed for consultation has undermined trust in the department and the government. Similarly, the refusal to consider implementation of the "moving bubble" in the Pender Wall area, and thereby make impossible scientific assessment of a reasoned alternative, has told the recreational sector that political pressure from environmental NGO's has far greater weight than carefully considered advice from DFO's longest established advisory body.

Government officials state that "there are no immediate plans to add new closures or to change the 2018 fisheries closures that protect the key foraging areas as described in the 2018 Southern Pacific Salmon Integrated Fisheries Management Plan". Given this year's experience, the SFAB might be forgiven for failing to be reassured by these words. The dictionary meaning of the word "immediate"

Gerry Kristianson, SFAB Chair
[redacted]
tel/fax: [redacted] e-mail: [redacted]

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Sport Fishing Advisory Board
Representing BC's Sport Fishing Community
50 YEARS 1964-2014

is "now", "at once", or "without delay". Its use in this context does not give confidence that "new closures" will not be announced next week or next month!

The SFAB submits that there is no pressing need to apply the "critical habitat" definition to these two areas. Nor can one be confident that the designations are appropriate until a full inventory and examination of other coastal areas has been completed. A refusal to slow down the designation process and to provide assurance that fishing closures in newly designated areas will not be considered until a full inventory of possible critical habitat has been completed, will be a negative signal to the recreational sector.

The SFAB worked diligently with the department this spring both to meet the required reductions in harvest of Fraser-bound chinook and to cooperate with the design of closed areas that would allow the collection of data to determine whether, in fact, the presence of anglers interferes with SRKW access to prey. It is significant that the end of the external review process for a new proposal to designate two additional areas as critical habitat has coincided with reports on the possible link between chinook abundance and effluent from Vancouver's three large sewage treatment plants. If your department was now to show that it is giving equal priority to addressing this issue, anglers might be persuaded that they are not viewed as an expendable substitute for action that could deliver demonstrable benefits to resident killer whales.

Yours sincerely,

G.L. Kristianson
SFAB Chair

Gerry Kristianson, SFAB Chair
tel/fax: e-mail:

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s.19(1)

Minister / Ministre (DFO/MPO)

From: Trudeau, Miriam
Sent: July-10-18 9:02 AM
To: Minister / Ministre (DFO/MPO)
Subject: FW: Letter to Minister
Attachments: SFAB letter to Hon Dominic LeBlanc 10 July 2018.pdf

---

From: Knudsen, Mark
Sent: Tuesday, July 10, 2018 9:00 AM
To: Trudeau, Miriam <Miriam.Trudeau@dfo-mpo.gc.ca>
Subject: FW: Letter to Minister

Can we please craft a resopnse?

From: [redacted]
Sent: Monday, July 9, 2018 3:54 PM
To: Knudsen, Mark <Mark.Knudsen@dfo-mpo.gc.ca>
Subject: Letter to Minister

Mark: Attached for the Minister's attention is a letter expressing the concern of the Sport Fishing Advisory Board with the process aimed at designating two additional areas as Critical Habitat for Southern and Northern Resident Killer Whales.

I would be happy to provide further background if that would be helpful.

Gerry

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s.19(1)

s.21(1)(a)

Rakkar, Jasmine

From: Johal, Sharan on behalf of Reid, Rebecca
Sent: July-09-18 8:16 AM
To: Rakkar, Jasmine
Subject: [redacted] SRKW SARA expansion

Categories: To Do/ Pending

[redacted] for a response please.

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: [redacted]
Sent: July-07-18 3:39 PM
To: Reid, Rebecca
Subject: FW: SRKW SARA expansion

Dear Rebecca
I would to take a moment to let u know how disappoint I am that DFO has tried to engage sport fishing anglers, guide, lodge and tackle suppliers and distributor at the height of our season ☹ We are all either trying to fish and enjoy our sport or put food on our tables and feed are families...Not sure if you are aware those of us involved in the industry we have a very small window of opportunity to make enough to help carry us thru the winter months...With DFO implementing this consultation process now we cannot even engage the SFAC & SFAB process which are there to advise DFO and give you are feedback..so how can we even be fairly represented in this process . This needs to be put in Play in Oct. . to align with a Process that DFO is funding to get it done right.

On another note as someone who makes a living guiding and supporting the sport fisherman of BC I have already been hard hit by the earlier decision in the Sooke area Salish Sea and with the proposed new areas will impact me even heavier.. As a middle class blue collar worker it's already hard enough to make ends meat without having decision based on proper science and common season... The answer restore all the small hatchery programs that DFO has cancelled the last 12 years in the upper fraser.. one of the major reason why we are where we are.... Much need habitat work and let get more salmon in the water..crank up the hatchery system that we have now...get more fish in the water asp....

Regards
[redacted]

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HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

Ottawa
Room 319
Confederation Building
Ottawa, Ontario
K1A 0A6
Tel.: 613-992-0903
Fax.: 613-992-0913

Parksville
Main Community Office
1209 East Island Hwy,
Suite 12
Parksville, BC
V9P 1R5
Tel.: 250-947-2140
Fax.: 250-947-2144

Gord Johns
Member of
Parliament
Courtenay—Alberni

Gord.Johns@parl.gc.ca
http://gordjohns.ca/

Port Alberni
Satellite Community Office
4841 A Johnston Rd.,
Port Alberni, BC
V9Y 5M2

Courtenay
Satellite Community Office
Unit E, 367 4th St.,
Courtenay, BC
V9N 1G8

July 11, 2018

The Honourable Dominic Leblanc
Minister of Fisheries, Oceans and the Canadian Coast Guard
200 Kent Street, 15th Floor
Ottawa, ON K1A 0E6

2018-001-01314

Dear Minister,

I am writing to you today to ask that you take immediate steps to extend the 30-day external review process of the Draft Amended Recovery Strategy for Northern and Southern Resident Killer Whales. The draft includes reference to the proposed protection of critical killer whale habitat in my riding on the west coast of Vancouver Island (Swiftsure and La Perouse Banks). This process concludes today and needs to be extended.

There has been a deluge of reaction from my constituents who will be seriously affected should these habitats be designated under the Recovery Strategy. Fundamental in this reaction are concerns that notice of this 30-day process for external comment has not been sufficiently disseminated to those who wish to contribute. While visiting this area of my riding this week, I have seen evidence of this and, in fact, my office only became aware of this process late last week.

Conducting a consultative process that impacts fisheries in the midst of the fishing season is being viewed with suspicion and mistrust that the government either places a low value on input from the stakeholders or has already decided the outcome and is checking boxes on a list of consultation requirements. Further, there is deep concern that although it is stated that this process pertains only to public consultation on the designation of killer whale habitat, there will be no way to prevent it from eventually being translated into fishery closures that will seriously impact livelihoods.

The extension of both the 30-day external review comment process and an extension and revision to the sixty-day consultation process is urgently requested. Further, the use of an "on-line" methodology rather than more appropriate interactive approaches to engagement would go a long way to restoring confidence that your department is considering both science and local knowledge as the basis for decisions.

Thank you for your consideration of this urgent request. Please don't hesitate to contact me directly if you wish additional information and assistance.

Sincerely,

Gord Johns, MP
Courtenay-Alberni

min

2018-001-01314 JOHNS JULY 24 3935605

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Cc: MP Fin Donnelly, NDP Critic for Fisheries and Oceans
Tawney Lem, Executive Director, West Coast Aquatic
Josie Osborne, Mayor of the District of Tofino
Mike Ruttan, Mayor of Port Alberni
Bill Collette, Executive Director, Port Alberni Chamber of Commerce

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Minister / Ministre (DFO/MPO)

From: Trudeau, Miriam
Sent: July-12-18 12:56 PM
To: Minister / Ministre (DFO/MPO)
Subject: FW: Letter to the Minister
Attachments: Letter to Leblanc re fisheries closure July 2018.pdf

Please draft response.

From: Knudsen, Mark
Sent: Thursday, July 12, 2018 12:31 PM
To: Trudeau, Miriam <Miriam.Trudeau@dfo-mpo.gc.ca>
Subject: FW: Letter to the Minister

Another one on this for response. I'm likely going to do a briefing MP Johns, plus regional officials later next week as a heads up.

From: Johns, Gord - Assistant 1 <Gord.Johns.A1@parl.gc.ca>
Sent: Thursday, July 12, 2018 12:25 PM
To: Knudsen, Mark <Mark.Knudsen@dfo-mpo.gc.ca>
Cc: Wooley-Berry, Dylan <Dylan.Wooley-Berry@dfo-mpo.gc.ca>
Subject: Letter to the Minister

Hello Mark,

I'm writing to let you know that Gord Johns has written to Minister Leblanc on an urgent issue regarding the killer whale habitat protection consultation period. Please find his letter attached.

The original hard copy is being delivered by messenger to the Minister's office today. I trust you can ensure this letter is received by the Minister, and if possible, Gord would appreciate a follow up phone call with yourself or the Minister if either of you are available to discuss his request for an extension of the consultation period.

With thanks,
Christine

Christine Ackermann
Legislative Assistant to Gord Johns, MP
613-992-0903 office
[redacted] *cell*

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Wilkinson, Davida

From: Mclarens, Scott
Sent: July-16-18 7:06 AM
To: pac.prmc / pac.urpcm (DFO/MPO)
Subject: FW: MCU Request - referall of comments on Northern and Southern killer whales
Attachments: External Review of Draft Recovery Strategy; FW: BC Chamber letter to M. LeBlanc re: DFO's "External Review"; TR: Letter in Response to DFO's External Review of the Critical Habitat Section for Norther Killer Whales

Hi Pacific,

Per below, could you please confirm that MCU can handle any correspondence on the "External review of the critical habitat section of the draft Amended Strategy for the Northern and Southern Killer Whales in Canada" through a manager referral to PAC SARA? Attached are the current incoming messages on the subject, any new incoming would be handled the same way.

Thank you,

Scott

From: Godby, Leah
Sent: July-16-18 10:03 AM
To: Mclarens, Scott
Cc: Jaremek, Daniel
Subject: FW: MCU Request - referall of comments on Northern and Southern killer whales

Hi Scott,

Michael has advised that a MCU manager referral makes sense. Can you please reach out to PAC SARA and see if they agree that we can just refer the correspondence to them? Alternatively, we can put it in as reply by department for them to answer.

Thanks,

Leah

From: Godby, Leah
Sent: July-16-18 9:35 AM
To: Valerio, Michael
Cc: Langton, Erin; Jaremek, Daniel
Subject: FW: MCU Request - referall of comments on Northern and Southern killer whales

Hi Michael,

The department had an external review process for stakeholders to provide their comments on the amended recovery strategy for the Northern and Southern Resident Killer Whales.
Comments were to be sent to the Pacific region SARA group.

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We received three letters on the subject addressed the Minister. I asked Scott to confirm with Julie Stewart where the comments should go and she confirmed they are to go to the PAC SARA. Can we just forward to them? Or do a MCU manager referral to program? The correspondents are:

- An association
- BC Chamber of Commerce
- Ucluelet's Mayor and Council

We could put them in for a reply but as PAC will not be responding to all the feedback they received, the response would most likely be, thank you for your letter.

I've attached the letters here and as well Julie Stewart's comments below.

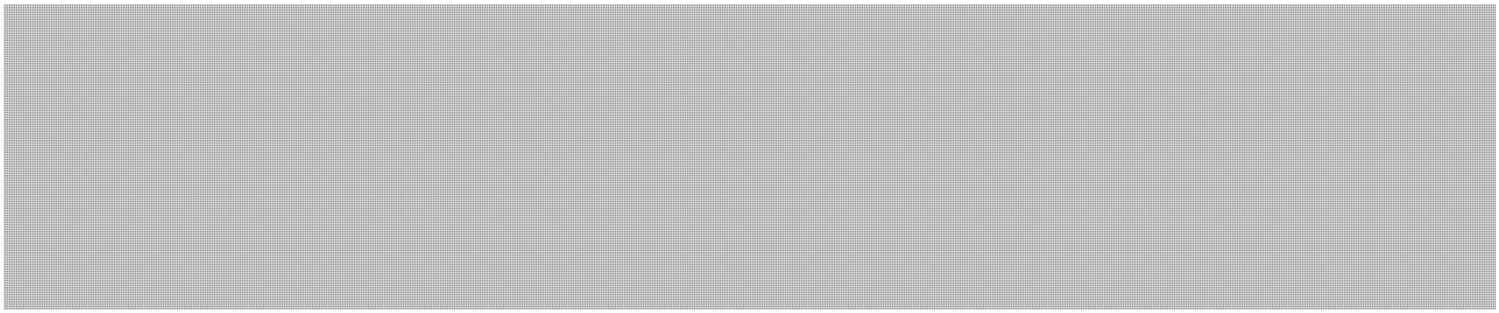
Leah

From: Mclarens, Scott
Sent: July-13-18 9:14 AM
To: Godby, Leah
Subject: FW: MCU Request - referall of comments on Northern and Southern killer whales

SAR advises we should send the incoming to PAC.

Scott

From: Stewart, Julie
Sent: July-12-18 6:39 PM
To: Mclarens, Scott; Kairouz, Amanda
Subject: RE: MCU Request - referall of comments on Northern and Southern killer whales



All incoming letters of this nature should be referred to Pacific Region as they are handling the consultations, and will have to reflect all positions received

Julie Stewart
Director / Directrice
Species at Risk Program / Programme des Espèces en Péril
200 rue Kent St.
Station 10W061
Ottawa, ON
K1A 0E6

(613) 949-7524 (t)

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[redacted](c)

Julie.stewart@dfo-mpo.gc.ca

From: Mclarens, Scott
Sent: Thursday, July 12, 2018 3:42 PM
To: Kairouz, Amanda <Amanda.Kairouz@dfo-mpo.gc.ca>
Cc: Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>
Subject: MCU Request - referall of comments on Northern and Southern killer whales

Hi Amanda,

Could you please advise whether MCU can refer to SAR comments received on the External review of the critical habitat section of the draft Amended Strategy for the Northern and Southern Killer Whales in Canada?

I have attached two examples of the incoming.

Thank you very much,

Scott McLarens

Writer/Editor, Ministerial Correspondence Unit
Fisheries and Oceans Canada / Government of Canada
scott.mclarens@dfo-mpo.gc.ca / Tel: 613-990-9950

Rédacteur/Réviseur, Unité de la correspondance ministérielle
Pêches et Océans Canada / Gouvernement du Canada
scott.mclarens@dfo-mpo.gc.ca / Tél. : 613-990-9950

XNCR-GrpCW/RC@dfo-mpo.gc.ca to contact all MCCU Writers / pour rejoindre tous les rédacteurs d'UCCM
XNCR-GrpCA/AC@dfo-mpo.gc.ca to contact all MCCU Analysts / pour rejoindre tous les analystes d'UCCM

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Wilkinson, Davida

From: Trudeau, Miriam
Sent: July-12-18 12:01 PM
To: Minister / Ministre (DFO/MPO)
Subject: FW: BC Chamber letter to M. LeBlanc re: DFO's "External Review"
Attachments: BCCCLetter_MinisterLeBlanc_Jul10_2018.pdf

Please prepare a response

From: Knudsen, Mark
Sent: Thursday, July 12, 2018 1:25 PM
To: Trudeau, Miriam <Miriam.Trudeau@dfo-mpo.gc.ca>
Subject: FW: BC Chamber letter to M. LeBlanc re: DFO's "External Review"

Another letter – this time from the BC Chamber of Commerce on the SRKW habitat consultation question.

From: LeBlanc, Dominic - député <dominic.leblanc@parl.gc.ca>
Sent: Thursday, July 12, 2018 1:18 PM
To: Knudsen, Mark <Mark.Knudsen@dfo-mpo.gc.ca>
Subject: TR: BC Chamber letter to M. LeBlanc re: DFO's "External Review"

De : Val Litwin [mailto
Envoyé : 10 juillet 2018 13:27
À : LeBlanc, Dominic - député
Cc : Premier@gov.bc.ca; 'RENFREW CHAMBER'; info@bamfieldchamber.com; chamberoffice@uclueletinfo.com; Karl Ablack; Bill Collette; info@sookeregionchamber.com
Objet : BC Chamber letter to M. LeBlanc re: DFO's "External Review"

Dear Minister LeBlanc,

Attached please find a letter from the ***BC Chamber of Commerce*** regarding our members' deep concern over the Department of Fisheries and Oceans' current *"External Review of the critical habitat section of the draft Amended Recovery Strategy for the Northern and Southern Killer Whales in Canada".*

I look forward to your reply.

Sincerely,

Val Litwin
President & CEO
604.638.8110 | vlitwin@bcchamber.org | www.bcchamber.org

BC Chamber of Commerce | *The Voice of Business in BC*

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July 10th, 2018

BC Chamber of Commerce
Know what's on BC's mind.

Minister Dominic LeBlanc
Ministry of Fisheries, Oceans & the Canadian Coast Guard
House of Commons
Ottawa, Ontario
K1A 0A6

Re: B.C. Business Community Concern over the Department of Fisheries & Oceans' "External Review of Critical Habitat"

Dear Minister LeBlanc,

The BC Chamber is B.C.'s biggest and broadest, most grassroots business network. We represent the views of over 36,000 members from every sector of the BC economy. Our purpose is to *know what's on BC's mind* – and, right now, the Department of Fisheries & Oceans' (DFO) *"External review of the critical habitat section of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada" ("External Review")* is of great concern to our members.

Habitat protection for southern resident killer whales must be a priority – but so must adequate consultation with the communities and businesses that would certainly be devastated by any potential fin fish closure in the areas of La Pérouse and Swiftsure Banks (two "critical habitat" areas noted on the DFO website[1]).

It appears that the consultation period for the "External Review" concludes on July 11th. This window for commentary is grossly insufficient if DFO truly hopes to capture the opinions and insights of individuals and businesses involved in the recreational and commercial fishing industries. Currently, many of these businesses are in the middle of "peak season" and are too maxed-out in their operations to offer fulsome, well-considered feedback. Indeed, there could not be a less opportune time for such an important consultation. Communities and stakeholders, for whom so much is riding on this decision, cannot be reasonably expected to engage in such a swift and, according to our members, under-promoted, process.

Based on conversations with our members in Sooke, Port Renfrew, Port Alberni, Bamfield, Ucluelet and Tofino we note that no businesses have reported being contacted directly or served notice to participate in the consultation currently being conducted by DFO.

The negative economic ramifications for coastal, island communities due to any sort of closure for La Pérouse and Swiftsure Banks that might flow from the "External Review" cannot be understated. From fish processing plants in Ucluelet to sport fishing guides in Port Alberni (who have already booked business, in some cases, years out, and must deliver on the expectations of tourists from all corners of the globe) – businesses up and down Vancouver Island's west coast will suffer.

The BC Chamber is urgently requesting DFO put their current consultation on hold and embark on a proper and fulsome consultation that instead runs from November 2018 to May 2019, when key stakeholders in the industry can participate in a meaningful, thoughtful fashion.

Thank you for your consideration and timely reply. The BC Chamber and its local chambers stand ready to work with government to engage business in this important conversation.

Sincerely,

Val Litwin
President & CEO
BC Chamber of Commerce
CC: Premier John Horgan
Sooke, Port Renfrew, Port Alberni, Bamfield, Ucluelet and Tofino Chambers of Commerce

BCCHAMBER.ORG | BCCC@BCCHAMBER.ORG | #1201 - 750 W. PENDER ST. VANCOUVER, BC. V6C 2T8 | P 604.683.0700 | F 604.683.0410

1. http://www.pac.dfo-mpo.gc.ca/forms/sara-lep/killerwhales-epaulards/workbook-cahier-eng.aspx and http://www.pac.dfo-mpo.gc.ca/consultation/sara-lep/killerwhales-epaulards/discussion-eng.html

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Wilkinson, Davida

From: LeBlanc, Dominic - député <dominic.leblanc@parl.gc.ca>
Sent: July-12-18 12:06 PM
To: Minister / Ministre (DFO/MPO)
Subject: TR: Letter in Response to DFO's External Review of the Critical Habitat Section for Norther Killer Whales
Attachments: Letter to DFO.pdf

Importance: High

De : Darcey Bouvier [mailto:
Envoyé : 11 juillet 2018 17:34
À : LeBlanc, Dominic - député
Cc : Marlene Lagoa
Objet : Letter in Response to DFO's External Review of the Critical Habitat Section for Norther Killer Whales
Importance : Haute

Dear Minister LeBlanc,

The attached letter is being sent on behalf of the District of Ucluelet's Mayor and Council.

Sincerely,

DISTRICT OF
UCLUELET

Darcey Bouvier
Finance & Administration Clerk
District of Ucluelet - 200 Main Street
PO Box 999 - Ucluelet, BC V0R 3A0
T: 250.726.7744; F: 250.726.7335

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DISTRICT OF
UCLUELET

July 11, 2018

File No: 0420-20 DFO

Minister Dominic LeBlanc
Ministry of Fisheries, Oceans and the Canadian Coast Guard
Via Email: dominic.leblanc@parl.gc.ca

Dear Minister LeBlanc,

Re: External review of the critical habitat section of the draft Amended Recovery Strategy for the Northern and Southern Killer Whales in Canada

I am writing to you on behalf of Council to share our concerns, as well as those from the community at large, regarding the external review of the critical habitat section of the draft Amended Recovery Strategy for the Northern Killer Whales in Canada (the "Recovery Strategy").

The Recovery Strategy was discussed at the Regular Meeting of Council held July 10, 2018. Council discussed both DFOs external consultation process and the significant amount of feedback Council has received from local stakeholders. We are very concerned with the consultation process as neither the District of Ucluelet nor the Ucluelet Chamber of Commerce received an invitation to participate. However, our biggest concern is the timing of the consultation during the summer.

The District of Ucluelet only learned of DFOs consultation on the Recovery Strategy when it was brought to Council's attention by a local stakeholder group – the West Coast Fishing Guides Association. The timing of the consultation has created undue stress for local sport fishing groups and charters during their busiest time of year. These groups have reported an increase in questions from the public asking about the potential closure. Hence, the community fears that poor communication around the Recovery Strategy is already negatively impacting our local fishing industry as potential visitors make alternate vacation plans due to the threat of a future fishing closure.

DFOs request for stakeholders to provide feedback by July 11th is far too short of a period for a decision that has the potential to devastate not only fishing industries but also communities on the west coast. Ucluelet Council is urgently asking that DFO postpone the external review and hold a lengthy and in-depth consultation process from November 2018 to May 2019. The new time frame would allow DFO to identify and reach out to stakeholders at a time when they can participate more fully.

District of Ucluelet . *Life on the Edge®*

200 Main Street
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info@Ucluelet.ca

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Thank you for taking the time to hear our concerns on the current and future negative economic ramifications that any sort of closure will have on the District of Ucluelet and other west coast communities. We eagerly await news on the future of the consultation process.

Sincerely,

Dianne St. Jacques
Mayor, District of Ucluelet

pp: Mark Boysen
Chief Administrative Officer, District of Ucluelet

cc: Kevin Cortes, Harbour Manager
Harbour Advisory Commission
Ucluelet Chamber of Commerce
Tofino Mayor & Council

s.19(1)

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Wong, Eva

From: Robinson, Orla [redacted]
Sent: July-17-18 2:49 PM
To: Brekke, Heather
Cc: Lim, Rangyn
Subject: Potential input to ECHO online whale training tutorial for mariners- Module 1
Attachments: Storyboard-Whales-Mod1-V0.4_ECHO.DOCX

Hi Heather,

I am hoping to seek your assistance on a current project that the ECHO Program and BC Ferries is working closely together on. As you may recall from our last AWG meeting and project updates, Leslie had mentioned the development of an online training tutorial, called "Whales in our Waters", to help mariners identify cetaceans and navigate safely around them.

BC Ferries has been leading the project with ECHO's assistance on the marine mammal sections of the module. We have also partnered with Lance Barrett-Lennard and his CORI team to help confirm and review the species identifications sections of the tutorial. Given that we also provide some background context in the tutorial around Canadian and US regulations/SARA etc. and reference recent regulatory changes and requirements, it would be extremely valuable to have your lens on reviewing the accuracy and information presented and I was wondering if you might be open to a short review from the Canadian perspective? Lynne Barre from NOAA will be reviewing from US perspective.

I attach Module 1 which is a word document with approximately 6 slides and pop ups. If pressed for time, the main pages that reference legislation and that we would appreciate your feedback on are from Page 5 -8. We are aiming to have feedback on this module in the coming week, by July 24th. Apologies for short notice but we would be appreciative of any comments, edits or suggestions that you could offer by then – please feel free to track changes as needed.

We would of course be more than happy to acknowledge DFO as a reviewer and could credit DFO accordingly, as you see fit. Leslie has also reached out to Paul Cottrell to help with the review of a different module (Module 5), which provides information on reporting for marine mammals in distress.

Thanks for your consideration of this request. Please let me know if you have any questions.
Thanks,

Orla

Orla Robinson M.Sc.
Program Manager, ECHO Program

PORT of vancouver

Vancouver Fraser Port Authority
100 The Pointe, 999 Canada Place
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9106
Cell: [redacted]
portvancouver.com

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Whales in our Waters: MODULE 1 STORYBOARDS - Protection of Whales

Document Revision History

REVISION NUMBER	DATE OF ISSUE	AUTHOR(S)	DESCRIPTION
0.1	03 April 2018	Julie Birlew / Rangyn Lim	Working Draft
0.2	07 April 2018	Julie Birlew / Rangyn Lim	Incorporated first round feedback from Rangyn Lim and Orla Robinson
0.3	01 May 2018	Julie Birlew / Rangyn Lim	Incorporated comments received from second round feedback (external SMEs)
0.4	06 May 2018	Julie Birlew / Rangyn Lim	Incorporated killer whale and humpback whale details with Critical Habitat area maps. Incorporated additional graphics.

Module Learning Objectives:

Topics / Learning Objectives	Est. Duration (mins)	Sources of Content (E.g. work instruction, SME, existing training material)	Notes
1. Protection of Whales			**SME – Rangyn Lim / Orla Robinson**
Discuss the need for the protection of vulnerable whale species in BC including: • Understanding the *Species at Risk Act* (SARA) • Understand *Fisheries Act,* Marine Mammal Regulations • Knowing the designations of endangered and threatened. • Listing critical habitat areas on the West Coast of BC for SRKW, NRKW and Humpback Whales	1-2 Slides	P. 9 of Mariner's Guide Reference to critical habitat maps and areas of importance 1. SRKW 2. Humpback whale	Intro Module (not Module 1) should also include a page of recognition of sponsors/partners.

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Topics / Learning Objectives	Est. Duration (mins)	Sources of Content (E.g. work instruction, SME, existing training material)	Notes
Describe Vessel Disturbances including: • Strikes and factors that increase their risk • Physical disturbance • Acoustic disturbances (vessel noise)	2 Slides Video	P. 10-12 of Mariner's Guide P. 24 – 25 Vessel size comparison to whale http://wildwhales.org/threats/vessel-disturbance/ Cavitation/underwater vessel noise video clip.	

Module Notes:

- Module is currently **6 slides**. Our design estimated 4 slides.
- Tech Team suggested it would be a nice clean look if we did not have a scrolling vertical bar; therefore we try to keep the content per storyboard/slide to the amount you could view without scrolling.
- If you are not familiar with the term "Lightbox" this is a window that opens on top of the page you are on (the page you are on appears dimmer in the background.)
- Graphics, diagrams, photo's etc. have been snagged to show placement. The original source will need to be provided to the technical team.
- Photos shall include credit only when displayed. File name is there for technical team.
- References have been included as Blue Superscript. Numeric Superscript matches Mariner's Guide. Asterisk reference is included in that Storyboard's notes.
    - Tech Team Note – we discussed having this as an asterisk (or another symbol if you wish) that a user could click to see reference (similar to the way references function on this page: https://clearseas.org/underwater-noise/). User could then "click-through" to get to the reference page.
    - On the Reference page, all references should be listed alphabetically for ease of maintenance.
- There will be an Introduction Module prior to Module 1 to explain Course Objectives / Credits.
- The Help Icon will link to help on how to navigate within the tutorial.
- Module 1 Links for References Page:
    - https://www.portvancouver.com/environment/water-land-wildlife/marine-mammals/echo-program/
    - https://www.portvancouver.com/wp-content/uploads/2017/07/Mariners-Guide-to-Whales-Dolphins-Porpoises-of-Western-Canada.pdf
    - http://wildwhales.org/threats/

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Whales in our Waters

HOME

GLOSSARY

REFERENCE

HELP

EXIT

MODULE 1 Protection of Whales

In this module...

This module will explore the need for the protection of at-risk whale species. You will learn about legislation and designations to protect cetacean species and be able to identify critical habitat and Important Areas on the West Coast for killer whales and humpback whales. By completing this module, you will also have an opportunity to learn about where and how vessels may be affecting whales.

Did you know that the term 'cetacean' includes whales, dolphins, and porpoises? In this guide, the term 'whale' will be used to describe whales, dolphins and porpoises collectively.

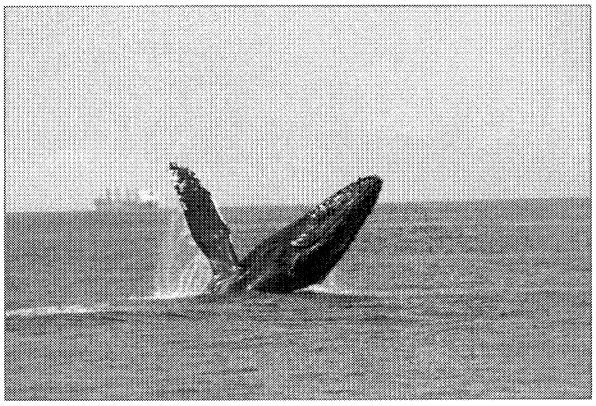

Photo Credit: Joan Lopez (File: ECHO ONLY - JOAN LOPEZ PHOTO CREDIT - HB - Georgia Strait 2.JPG)

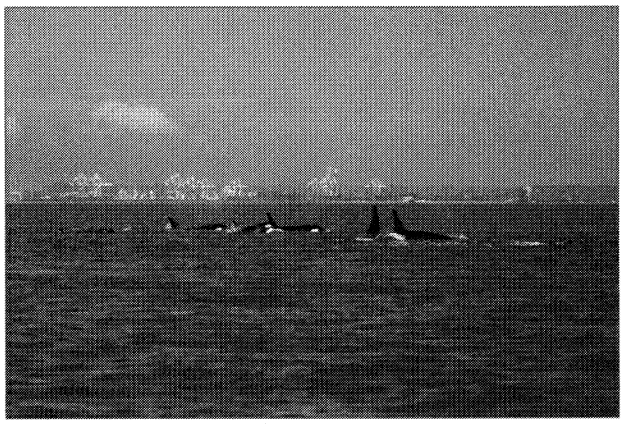

Photo Credit: Joan Lopez (File: ECHO ONLY - JOAN LOPEZ PHOTO CREDIT – SRKW – Deltaport.JPG)

CC

Page Name	00-1-1
Notes for Tech Team	• Clicking on the whale icon reveals coloured bar and fun fact. • Clicking on the glossary word reveals small box with definition with a link to the corresponding term on the Glossary page.

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	• Glossary Term: cetacean, Critical Habitat • Photos should include photo credit below photo. File name is included for Tech Team reference only and should **not** appear on the actual page. • Clicking on Left arrow takes user to Page 00-0-X (Last page of Intro Module) • Clicking on Right arrow takes user to Page 00-1-2
Feedback/ Revisions	

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Whales in our Waters

Protecting At-Risk Whales

The Pacific Northwest is known for its beautiful coastlines and diverse marine environment. Both Canada and the United States have legislation and regulations in place to help protect and conserve marine life and their habitat.

As we discuss different whale species in the next few topics, you will find it helpful to understand the legislative framework and terms described below.

[Legislative Scroll icon with CDN flag?]

Species at Risk Act

The *Species at Risk Act* (SARA) was created to prevent Canadian indigenous species, subspecies, and distinct populations from becoming extirpated or extinct, to provide for the recovery of endangered or threatened species, and encourage the management of other special concern species to prevent them from becoming at risk. Critical habitat has also been defined for some SARA listed species. **Click to learn more about these terms under SARA.**

Fisheries Act - Marine Mammal Regulations

In Canadian waters, whales are also protected under the Marine Mammal Regulations (MMR) of the *Fisheries Act* which prohibits the disturbance of marine mammals.

[Legislative Scroll icon with USA flag?]

Marine Mammal Protection Act

The *Marine Mammal Protection Act* (MMPA) prohibits the "taking" of any marine mammal species in U.S. waters where "take" means to hunt, harass (approach within 100 yards), capture, or kill any marine mammal or attempting to do so.

Endangered Species Act

Under the *Endangered Species Act* (ESA), the U.S. federal government has the responsibility to protect endangered species, threatened species and critical habitat in U.S. waters. **Click to learn more about these terms under ESA.**

Southern resident killer whales are currently designated as endangered in both Canada and the United States.

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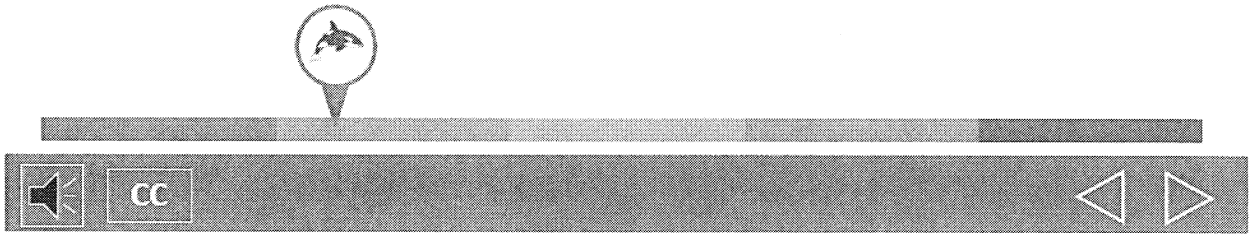

Page Name	00-1-2
Notes for Tech Team	• Glossary Terms: extirpated, endangered, threatened, special concern, critical habitat • Clicking on the text **"Click to learn more about these terms under SARA"** opens Lightbox Page 00-1-2a • Clicking on the text **"Click to learn more about these terms under ESA"** opens Lightbox Page 00-1-2b • Clicking on Left arrow takes user to Page 00-1-1 • Clicking on Right arrow takes user to Page 00-1-3
Feedback/ Revisions	• Emily will provide the "legislative scroll" graphics.

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Canadian *Species at Risk Act* (SARA) Terms

Endangered: Species facing imminent extirpation or extinction.

Examples of listed species: blue whale, sei whale, North Pacific right whale, and southern resident killer whale

Threatened: Species which are likely to become endangered if nothing is done to reverse the factors leading to their extirpation or extinction.

Examples of listed species: fin whale, northern resident killer whale, offshore killer whale and Bigg's (transient) killer whale

Special concern: Species which may become threatened or endangered because of a combination of biological characteristics and identified threats.

Examples of listed species: grey whale, humpback whale, harbour porpoise

Extirpated: Species that no longer exist in the wild in Canada, but exist elsewhere in the wild.

Critical habitat: is defined under the *Species at Risk Act* (SARA) as "the habitat that is necessary for the survival or recovery of a listed wildlife species that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species". SARA not only prohibits the killing, harming, harassing, capturing or taking of species at risk, but also makes it illegal to destroy their critical habitats (e.g., through acoustic degradation).

Page Name	00-1-2a: Lightbox SARA Terms
Notes for Tech Team	• Clicking on **"Click to learn more about these terms under SARA"** opens this lightbox. • Clicking on **X** closes Lightbox. • Glossary Terms: Endangered, threatened, special concern, extirpated, critical habitat.
Feedback/ Revisions	

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U.S. *Endangered Species Act* Terms

Endangered: Species that are in danger of extinction throughout all or a significant portion of their range.

Threatened: Species that are likely to become endangered in the foreseeable future.

Critical habitat: specific areas that are:

- within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection.
- outside the geographical area occupied by the species if it is determined that the area itself is essential for conservation.

Page Name	00-1-2b: Lightbox ESA Terms
Notes for Tech Team	• Clicking on **"Click to learn more about these terms under ESA"** opens this lightbox. • Clicking on **X** closes Lightbox. • Glossary Terms: endangered, threatened, critical habitat
Feedback/ Revisions	

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Whales in our Waters

Critical Habitat and Important Areas on the West Coast

If you are a seasoned mariner, you likely appreciate the view from your wheelhouse and already have an understanding of areas for heightened awareness of whales.

The maps below highlight critical habitat and important areas that have been identified for two commonly sighted species that are listed and need protection in our waters: the northern and southern resident killer whale and humpback whale.

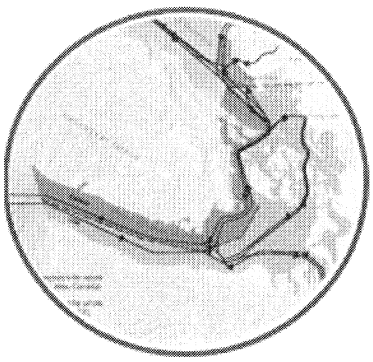
You will learn much more about how to identify these species and where they are usually found in **Module 2: Whale Identification.**

There are three distinct types of killer whales in our waters – Residents, Bigg's (Transients) and Offshore. Resident killer whales are divided into two populations – the southern and northern residents.

As of July 2018, Canadian regulation requires all vessels to stay at least 200 m away from killer whales.

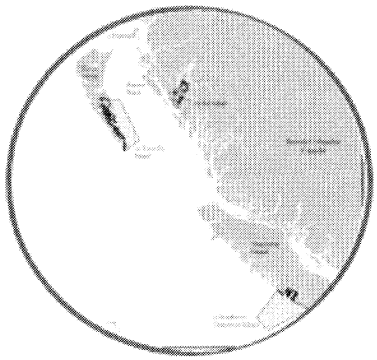
U.S. Regulations also require that all vessels stay at least 200 yards away from killer whales.

Select the images below to view each map



Map Credit: Mariner's Guide

Northern and Southern Resident Killer Whale Critical Habitat



Map Credit: Mariner's Guide

Humpback Whale Important Areas

000190

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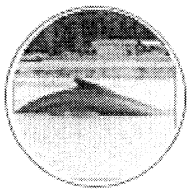
Did you know that there are less than 100 southern resident killer whales remaining in the population?

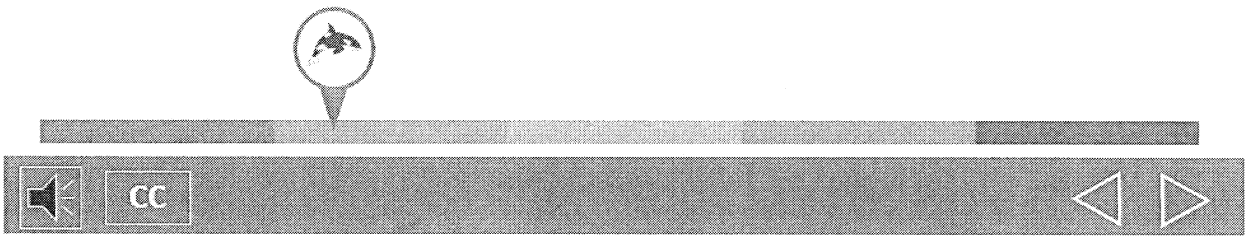
Photo Credit: Ocean Wise
(File: pg.43)



The southern BC / Washington population of humpback whales is estimated at approximately 200-400 whales.

Photo Credit: Ocean Wise
(File: pg.29)

Click on the image of each species to learn important facts about their SARA listing status and population size.



Page Name	00-1-3
Notes for Tech Team	• Glossary Term: Critical habitat • Clicking on Module 2: Whale Identification takes user to Page 00-2-1. • Clicking on **Northern and Southern Resident Killer Whale Critical Habitat Map** opens Lightbox Page 00-1-3a. • Clicking on **Humpback Whale Important Areas** opens Lightbox Page 00-1-3b. • Clicking on the killer whale and humpback whale images opens Lightbox Page 00-1-3c. • Clicking on Left arrow takes user to Page 00-1-2 • Clicking on Right arrow takes user to Page 00-1-4 • Map source file: Killer Whale Map: SRKW and NRKW Critical Habitat Map.jpg • Map source file: Humpback Whale Map: Humpback Important Areas Map.jpg • Image source file: Killer Whale – p43 {Rangyn – require source} • Image source file: Humpback Whale – p29 {Rangyn – require source}
Feedback/ Revisions	• {John – would it look better to put the whale pics slightly overlapped with the map image? Please use your discretion on layout of this page.}

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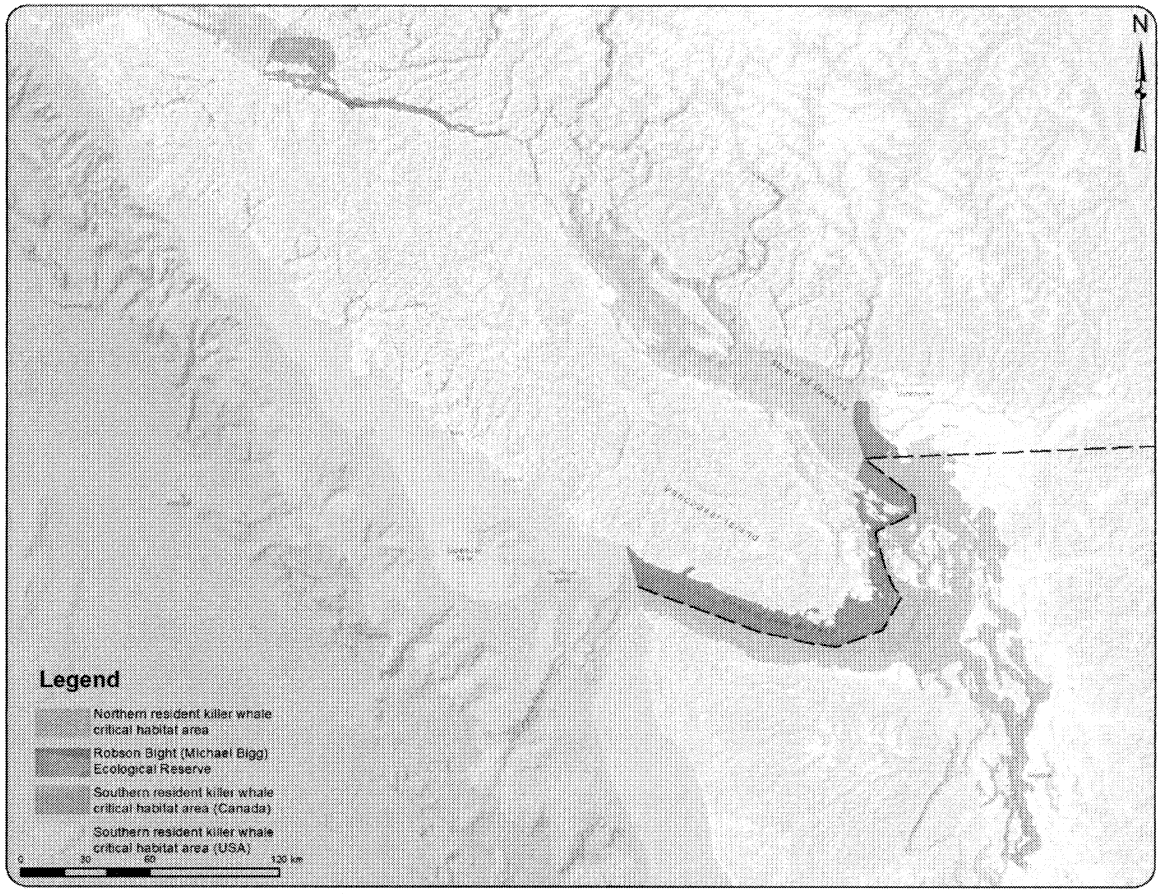
Northern and Southern Resident Killer Whale Critical Habitat



VFPA PLAN G2018-052srkw

Map Credit: Mariner's Guide

Page Name	00-1-3a: Lightbox Northern and Southern Resident Killer Whale Critical Habitat
Notes for Tech Team	• Clicking on **Southern Resident Killer Whale Critical Habitat** on 00-1-3 opens this lightbox. • Clicking on **X** closes Lightbox. • Map file: SRKW and NRKW Critical Habitat Map.jpg
Feedback/ Revisions	

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Humpback Whale Important Areas

Map Credit: Mariner's Guide

Page Name	00-1-3b: Lightbox Humpback Whale Critical Habitat
Notes for Tech Team	• Clicking on **Humpback Whale Critical Habitat** opens this lightbox. • Clicking on **X** closes Lightbox. • Map File: Humpback Important Areas Map.jpg
Feedback/ Revisions	

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Killer Whale and Humpback Whale Populations

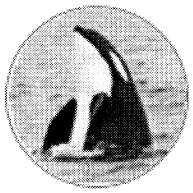

Photo Credit: Ocean Wise (File: pg.43)

Southern resident killer whales are listed as endangered under SARA and have less than 100* individuals remaining in the population. Seasonally, they spend much of their time in the waters of their critical habit along the south coast. (*76 individuals as of May 2018.)

Northern resident killer whales are listed as threatened under SARA and numbers around 250 individuals. They spend much of their time around their critical habitat during summer months.

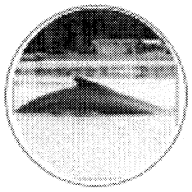

Photo Credit: Ocean Wise (File: pg.29)

Humpback whales are listed as Special Concern. The southeast Alaska and northern British Columbia region is estimated to have 3,000-5,000 whales, while the southern B.C. and Washington population is approximately 200-400 whales.

Page Name	00-1-3c: Lightbox Killer Whale and Humpback Whale Populations
Notes for Tech Team	• Clicking on the Killer Whale and Humpback Whale images opens this lightbox. • Clicking on **X** closes Lightbox. • Image source file: Killer Whale – p43 {Rangyn – require source file} • Image source file: Humpback Whale – p29 {Rangyn – require source file}
Feedback/ Revisions	

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Whales in our Waters

Sharing the Ocean

The waters of the eastern North Pacific are host to high densities of both cetaceans and marine traffic. Higher marine traffic also means increased potential for physical and acoustic effects on cetaceans.

Some of the key threats to whales in this region include:

- Physical injury or mortality (from vessel collision)
- Physical disturbance (from vessel proximity)
- Acoustic disturbance (from underwater vessel noise)
- Environmental contaminants
- Availability or prey

This training module will focus on physical disturbance and acoustic disturbance from vessels. **Module 4: Best Practices and Navigational Strategies** will discuss navigational best practices for minimizing vessel disturbances.

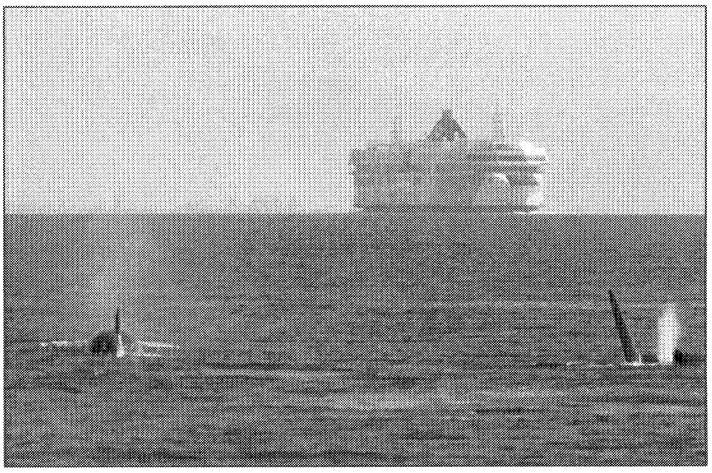

Photo Credit: Joan Lopez (File: ECHOONLY-JOANLOPEZPHOTOCREDIT-SRKW-GeorgiaStrait2 - Cropped.jpg)

To learn more about traffic density off the Pacific Northwest coast, click **here**.

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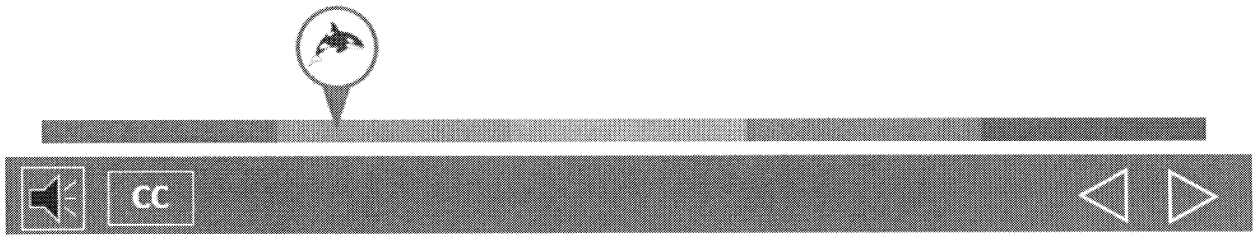

Page Name	00-1-4
Notes for Tech Team	• Clicking on **"Module 4: Best Practices and Navigational Strategies"** open page 00-4-1. • Clicking on "**To learn more about the traffic density off the Pacific and north west coast, click here"** opens Lightbox Page 00-1-4a. • Clicking on Left arrow takes user to Page 00-1-3. • Clicking on Right arrow takes user to Page 00-1-5. • Image source: ECHOONLY-JOANLOPEZPHOTOCREDIT-SRKW-GeorgiaStrait2 - Cropped.jpg
Feedback/ Revisions	

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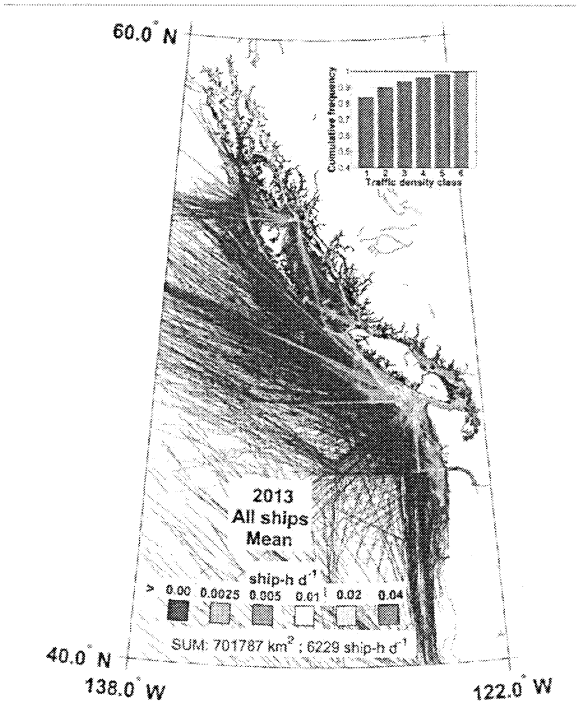
AIS Vessel Traffic Density Off the Pacific North West Coast for 2013



Credit: Mariner's Guide

Traffic density in time and space is visualized in five distinct categories, with dark blue symbolizing zero to very low density, and red symbolizing high density.

This figure (at left)* may be helpful to reference when reviewing the maps of whale abundance as a means of identifying areas where vessels and cetaceans and sea turtles both occur in high density.

Page Name	00-1-4a: Lightbox AIS Vessel Traffic Density Off the Pacific North West Coast for 2013
Notes for Tech Team	• Clicking on "**To learn more about the traffic density off the Pacific and north west coast, click here**" opens this Lightbox. • Clicking on **X** closes Lightbox. • Reference required denoted with *: Simard, Y., Roy, N., Giard, S., and Yayla, M. 2014. Canadian year-round shipping traffic atlas for 2013: Volume 3, West Coast. Can. Tech. Rep. Fish. Aquat. Sci. 3091(Vol.3)E: xviii + 327 pp. • Image file: Mariner's Guide p20. {Rangyn – require source file}
Feedback/ Revisions	• John – I have this note from Rangyn which indicates she is trying to find a better image for this lightbox. RL Commented - Julie, we will try to obtain a version of this map without the added histograms. Hope to have this one updated asap as there was a consensus of comments that the additional details in this map and text were confusing.}

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Whales in our Waters

Physical Effects and Disturbance

Whale populations are vulnerable to physical effects (e.g., injury and mortality) and general disturbance by vessels. In small populations like the southern resident killer whales, these impacts on individuals can have population-level effects*.

Risk of Collision – Whales are vulnerable to being struck and injured or killed by vessels. Vessel propeller strikes also occur when the whale is submerged and a propeller suction effect can pull a whale towards the stern of the vessel**.

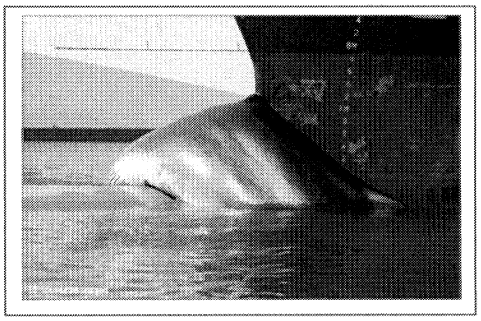

Photo Credit: Souffleurs D'Ecume

Vessel strikes are a recognized cause of mortality for a variety of cetaceans, many of which are found in our waters. ***

Did you know that vessels over 80 meters long, travelling faster than 14 knots, are the most likely to kill cetaceans in the event of a strike? Smaller vessels travelling at faster speeds are likely to cause significant vessel damage and human injury as well.

Physical disturbance by large and small vessels may disrupt behaviours and activities important for survival such as foraging, feeding, socializing and breeding.

Understanding the distribution of cetaceans helps identify and map high-risk areas for vessel strikes. A significant portion of these valuable data come from sightings reported by mariners on the water. Reporting best practices will be shown in **Module 5: Reporting Best Practices.**

Click here to see how your vessel compares to a whale.

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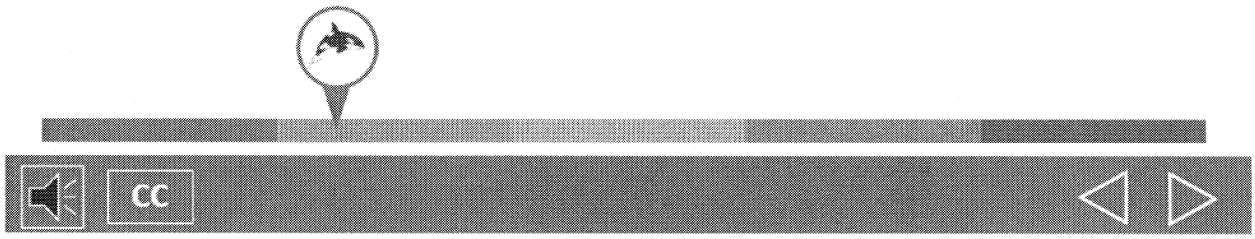

Page Name	00-1-5
Notes for Tech Team	• Clicking whale icon reveals coloured bar and fun fact. • Clicking on **Click here to see how your vessel compares to a whale** opens Lightbox Page 00-1-5a. • Clicking on Left arrow takes user to Page 00-1-4 • Clicking on Right arrow takes user to Page 00-1-6 • Clicking on **Module 5: Reporting Best Practices** takes user to Page 00-5-1. • Reference for *: Robert C. Lacy, Rob Williams, Erin Ashe, Kenneth C. Balcomb III, Lauren J. N. Brent, Christopher W. Clark, Darren P. Croft, Deborah A. Giles, Misty MacDuffee & Paul C. Paquet. Evaluating anthropogenic threats to endangered killer whales to inform effective recovery plans. *Scientific Reports,* Volume 7:14119(2017). *doi:10.1038/s41598-017-14471-0* • Reference for **: Silber, G. K., J. Slutsky, and S. Bettridge.2010. Hydrodynamics of a ship/whale collision. Journal of Experimental Marine Biology and Ecology 39: 10–19. • Reference for *** (there are 2 references): ○ Jensen, A.S. and G.K. Silber. 2003. Large Whale Ship Strike Database. U.S. Department of Commerce, NOAA Technical Memorandum, NMFS-OPR, 37 pp. ○ Laist, D.W., Knowlton, A.R., Mead, J.G., Collet, A.S., & Podesta, M. (2001). Collisions between ships and whales. Marine Mammal Science 17(1), 35-75. • Image file: Mariner's Guide p.11 {Rangyn – we will need the source file and permission to use this photo}
Feedback/ Revisions	

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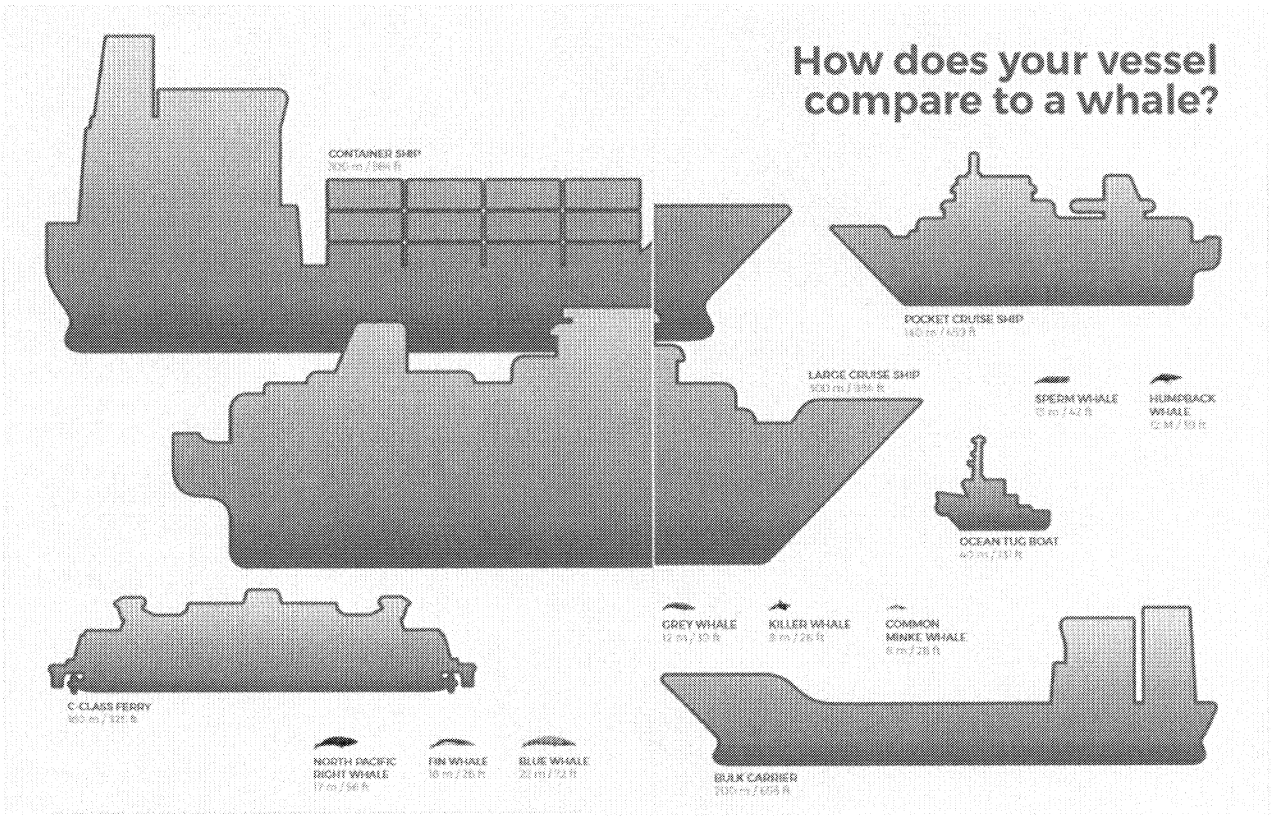
How does your vessel compare to a whale?



Credit: Mariner's Guide

Page Name	00-1-5a: Lightbox How does your vessel compare to a whale?
Notes for Tech Team	• Clicking on "**Click here to see how your vessel compares to a whale"** opens this Lightbox. • Clicking on **X** closes Lightbox. • Image file: Mariner's Guide p. 24 and 25 {Rangyn – we will need the source file}
Feedback/ Revisions	

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Whales in our Waters

Acoustic Disturbance

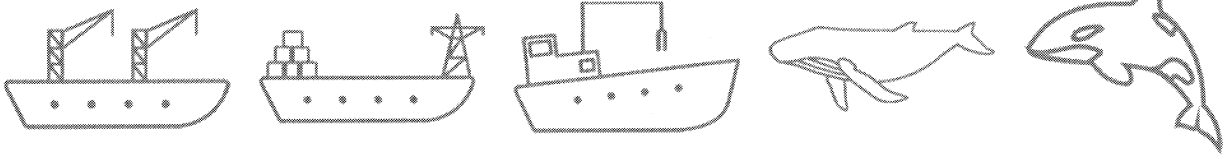
In the North Pacific Ocean, underwater noise has doubled in intensity every decade for the past 60 years.* Motorized vessels contribute to underwater noise and may cause behavioural disturbances and increased stress levels which can reduce the ability of whales to detect prey, communicate, navigate, rest, avoid danger, mate and care for their young.**.

The amount of noise produced by a vessel depends on its operational design, maintenance and machinery characteristics. Most of the noise vessels produce is generated by propeller cavitation and on board machinery which propagate at low frequencies and can travel thousands of kilometers underwater.***.

Audio Credit: OrcaLab

Listen to these northern resident killer whales near Hanson Island, B.C****.
Can you hear the vessel noise? Can you still hear the whales?

Now listen to various natural and human-made noise sources below.



Bulker | Tanker | Fishing Boat | Humpbacks | Killer Whale

Audio Credit: Echo and JASCO Applied Sciences

To learn more about cavitation, watch this 3 minute video by National Geographic.

Congratulations - you have completed Module 1!
Move forward to complete a short quiz to test your understanding of the concepts presented in this module.

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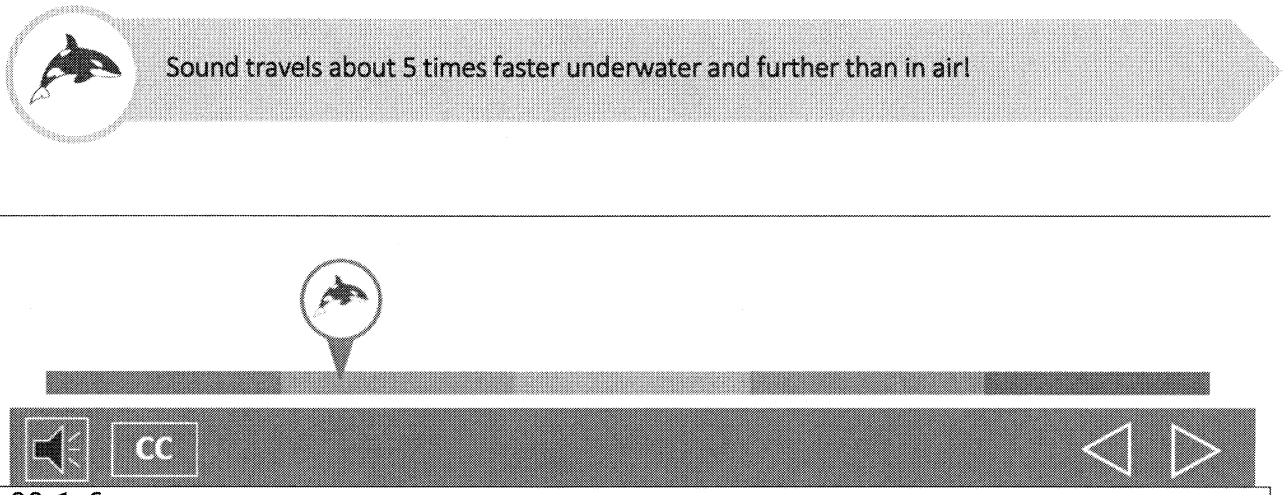

Page Name	00-1-6
Notes for Tech Team	• Clicking the whale icon reveals coloured bar and fun fact. • Clicking the sound icon (Orca Lab) will play the sound clip - Northern resident killer whales with boat noise - Hanson Island, BC - Orcalab credit.mp3 • Clicking the video icon will play the video found here: https://www.youtube.com/watch?v=ON_irzFAU9c • Clicking the sound icon will open the corresponding clip: o Bulker: Bulker - Edited 10 seconds.mp3 o Fishing Boat - Fishing Boat - Recorded from ECHO ULS - January 11, 2016 (mp3cut.net).mp3 o Humpbacks - Humpbacks -Recorded from ECHO ULS - December 25, 2015 (4seconds).mp3 o Killer Whale - Killer Whale - Recorded from ECHO ULS - October 4,2015.mp3 o Tanker Sound - Tanker Sound - Recorded from ECHO ULS - Dec 26, 2015 (mp3cut.net).mp3 • Clicking on Left arrow takes user to Page 00-1-5 • Clicking on Right arrow takes user to Page 00-2-1 • Reference for *: Hildebrand, J. (2009). Anthropogenic and natural sources of ambient noise in the ocean. Marine Ecological Progress Series, 395, 5-20. • Reference for **: Heise, K.A., Barrett-Lennard, L.G., Chapman, N.R., Dakin, D.T., Erbe, C., Hannay, D.E., Merchant, N.D., Pilkington, J.S., Thornton, S.J., Tollit, D.J., Vagle, S., Veirs, V.R., Vergara, V., Wood, J.D., Wright, B.M., Yurk, H. 2017. Proposed Metrics for the Management of Underwater Noise for Southern Resident Killer Whales Coastal Ocean Report Series (2), Ocean Wise, Vancouver, 31pp. • Reference for ***: Nolet, V. 2017. Understanding Anthropogenic Underwater Noise. Report Number TP 15348 E. Prepared for Transportation Development Centre of Transport Canada By Veronique Nolet, Green Marine Management Corporation. 106 pp. https://www.tc.gc.ca/eng/anthropogenic-underwater-noise.html • Reference for ****: Paul Spong, OrcaLab. http://orcalab.org/
Feedback/ Revisions	

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Quiz Questions

- To be determined once module content finalized. (John – there will be a separate storyboard provided later this month titled 'Assessment and Resources').

Glossary

- (John – the client identified the need to have both Canadian and USA definitions for some of these terms which is why they are so lengthy.)

Term	Definition
AIS	Automatic Identification System
Cavitation	The rapid formation of vapour or gas-filled cavities (e.g., bubbles) in a flowing liquid as a result of mechanical force, such as from a vessel propeller. This can account for 80-85% of the noise from a vessel.
Cetacean	Cetaceans include whales, dolphins, and porpoises. The cetacean order of marine mammals (Cetacea) include the toothed whales (odontocetes) and baleen whales (mysticetes).
Critical Habitat	"Critical habitat" is defined under the *Species at Risk Act* (SARA) as "the habitat that is necessary for the survival or recovery of a listed wildlife species that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species". SARA makes it illegal to destroy critical habitat of species at risk (e.g., through acoustic degradation). "Critical habitat" under the U.S. *Endangered Species Act* specifies areas that are: - within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection. - outside the geographical area occupied by the species if it is determined that the area itself is essential for conservation.
Endangered	Canadian *Species at Risk Act* 'Endangered' Definition: Species facing imminent extirpation or extinction. U.S. *Endangered Species Act* 'Endangered' Definition: Species that are in danger of extinction throughout all or a significant portion of their range.
Extirpated	Species that no longer exist in the wild in Canada, but exist elsewhere in the wild.
Special Concern	Canadian *Species at Risk Act* 'Special Concern' Definition: Species which may become threatened or endangered because of a combination of biological characteristics and identified threats.

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***Species at Risk Act* (SARA)**	The *Species at Risk Act* (SARA) is a piece of Canadian federal legislation. SARA was created to prevent Canadian indigenous species, subspecies, and distinct populations from becoming extirpated or extinct, to provide for the recovery of endangered or threatened species, and encourage the management of other species to prevent them from becoming at risk.
Threatened	Canadian *Species at Risk Act* 'Threatened' Definition: Species which are likely to become endangered if nothing is done to reverse the factors leading to their extirpation or extinction. U.S. *Endangered Species Act* 'Threatened' Definition: Species that are likely to become endangered in the foreseeable future.

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Wong, Eva

From: Leslie, Karen
Sent: July-17-18 3:47 PM
To: Brekke, Heather
Cc: Fershau, Jonathan; Webb, Cheryl
Subject: FW: Intention of BC to provide comments back on Critical Habitat for Northern and Southern Killer Whale
Attachments: RKW_SARCC_comments_compiled_12JUL18.docx

Hi Heather –

Karen gave me a draft of the comments that BC will be providing. The delay in response has been due to approvals in Ministry of Agriculture, so additional content will be coming with the formal response.

Karen Leslie
604-666-0395

From: Stefanyk, Karen ENV:EX [mailto:Karen.Stefanyk@gov.bc.ca]
Sent: 2018–July-17 3:41 PM
To: Leslie, Karen
Cc: Brekke, Heather; Webb, Cheryl; Dale, Alec R ENV:EX
Subject: RE: Intention of BC to provide comments back on Critical Habitat for Northern and Southern Killer Whale

Afternoon Karen,

Apologies in the delay, I've been tied up in meetings the majority of the day. I have attached the comments BC would like to submit with the caveat there are a few additional messages that will have to be sent along with our official response to the document. I am hoping to still get those solidified for tomorrow morning.

I have also left you a voice mail with further context. Happy to chat more and thank-you for your patience and collaboration.

Regards,

Karen

From: Leslie, Karen [mailto:Karen.Leslie@dfo-mpo.gc.ca]
Sent: Tuesday, July 17, 2018 10:52 AM
To: Stefanyk, Karen ENV:EX
Cc: Brekke, Heather; Webb, Cheryl
Subject: FW: Intention of BC to provide comments back on Critical Habitat for Northern and Southern Killer Whale

Hi Karen –

I am just following up on Cheryl's behalf, and my voicemail earlier this morning. We are moving quickly through our regional approvals process this week – when would BC be able to submit comments? Would you be able to provide a pre-approved version of the submission that we could review and use to revise the document in the interim?

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Please feel free to call today and discuss further,
Karen

Karen Leslie
Regional Manager, Species at Risk Program
Fisheries and Oceans Canada / Government of Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

Gestionnaire régional, Programme des espèces en péril
Pêches et Océans Canada / Gouvernement du Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

From: Stefanyk, Karen ENV:EX [mailto:Karen.Stefanyk@gov.bc.ca]
Sent: Monday, July 16, 2018 4:59 PM
To: Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Subject: Intention of BC to provide comments back on Critical Habitat for Northern and Southern Killer Whale

Dear Ms. Webb,

The Province of British Columbia fully intends to provide comments back on the amended Recovery Strategy for Northern and Southern Resident Killer Whales, specifically on Section 7 (Critical Habitat), as requested in your June 12, 2018 letter.

Apologies for the tardiness as I realize comments closed July 12, 2018. We have a submission ready it is currently in the review process and I hope to submit, on behalf of the Province in the next few days.

Thank-you for your collaboration and patience. Please contact me if you have any questions and/or concerns.

Karen Stefanyk, R.P.Bio.
Recovery Planning Coordinator
Ecosystems Branch | BC Ministry of Environment and Climate Change Strategy
Phone Number: 778-698-5188 | Email: Karen.Stefanyk@gov.bc.ca
Species & Ecosystems at Risk
Recovery Planning
Recovery Planning Documents
Join in the conversation on species-at-risk legislation in B.C. http://engage.gov.bc.ca/bcspeciesatrisk/

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

REVIEW:

Name of Reviewer (Affiliation): The Province of British Columbia - Charlie Short (Ministry of Forest, Lands, Natural Resource Operations and Rural Development [FLNR]); Ron Ptolemy (Ministry of Environment and Climate Change Strategy [ENV)]); Karen Stefanyk (ENV); Ben Clark & Amber Mattock (Tourism Branch, Ministry of Tourism, Arts and Culture [TAC]); Stephen Ban (BC Parks, [ENV]); Alanya Smith (Ministry of Indigenous Relations and Reconciliation [MIRR])

Date of Review: July 12, 2018

General Comments:

NOTE THIS IS PRECEEDING BC's OFFICIAL RESPONSE

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review
SPECIFIC COMMENTS

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
Charles Short [FLNR]	s. 7	1. Cumulative impacts of activities that may affect critical habitat components are not discussed enough or at all – this is an important consideration given the amount current and historical impacts to KW habitat. a. Refinement of mitigation measures spatially would benefit from more comprehensive cumulative impacts type analyses.		
Charles Short [FLNR]	s. 7	2. Access to rubbing beaches are identified as a key function for NRKWs in identified critical habitat yet they can be discretely spatially identified – why not be more explicit on location. It seems that legal protection for identified sites with specific regulations would be most effective in these areas and could be implemented on a priority basis.		
Charles Short [FLNR]	s. 7	3. Prey availability is another element of critical habitat that is clearly a high priority although only fishing is explicitly identified as a threat. Would be more useful to itemize all activities that are detrimental to salmon habitat, population units / stocks, by species and area. Mitigation and protective measure would be more easily identified and implemented.		
Charles Short [FLNR]	s. 7	4. Limited identification of terrestrial impacts to critical aquatic habitat – unclear as to what the extent of potential impacts of implementing the recovery strategy would be in this regard (e.g., forestry, urban planning and effluent regulations, shoreline / coastal development, tourism)		
Charles Short [FLNR]	s. 7	5. Given that SRKW identified critical habitat is in the most impacted, heavily populated and intensely utilized marine environment in the province that all identified features, functions and attributes (except rubbing beaches) exist it may be useful to prioritize areas within to assist in implementation and mitigate impacts to socio-economic		

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
		values that would be identified as impacting (i.e., destroying) aquatic critical habitat as defined.		
Ronald A. Ptolemy, R.P.Bio.	s 7	• Last review by Ptolemy completed in 2008 with stated concerns over unknown weighting by stressor to the persistence of healthy populations. Table 6 (current draft) is a good start to identifying stressors but is incomplete and has no science weighting as to what is really important to act on.		
Ronald A. Ptolemy, R.P.Bio.	s 7	• There is no indication of the relative risk of various stressors between the Northern and Southern populations. For example if the Northern population is classed as healthier than the Southern population in terms of reproductive rate or mortality rate, both populations are subject to marine noise conditions so is under-water noise a common characteristic that is of lower concern for mitigative actions? Johnstone Strait is a very noisy place with many outboard motors operating as detected through hydrophones each year. Any noisier than Strait of Juan de Fuca or Puget Sound?		
Ronald A. Ptolemy, R.P.Bio.	s 7	• If legal approach distances (200m) are the same during the busy summer months for both groups of Orca, is distance constraints a big issue?		
Ronald A. Ptolemy, R.P.Bio.	s 7	• It seems autopsy reports of dead Orca from the Southern Population Group show high levels of toxins and contaminants more so than for Northern Population, why does Table 6 not address this important issue. Providing more forage fish (chinooks and chum) may not be a holistic solution.		
Ronald A. Ptolemy, R.P.Bio.		• Is there a simple graphic that shows aerial frequency (use of drones) of poorly conditioned Orca differences between the two		

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
		target groups? Could not find this information in the supplied material.		
Ronald A. Ptolemy, R.P.Bio	S 7	• What efforts are being made to manage chinook fisheries to ensure sufficient spawner numbers are available to fill the freshwater capacity of rivers used by the salmon species for reproduction and rearing? This is not captured well in Table 6.		
TAC	General	• Because whale watching and sport fishing are tourism activities that fall under federal jurisdiction, there are limited management implications for the Province with respect to tourism specifically. Where the Province could play a proactive role is helping to promote responsible environmental guidelines and operating procedures in these industries. This aligns well with other work being done with the Adventure Tourism Coalition members with respect to heli-skiing and bear viewing. Many whale watching operators on the B.C. coast are part of the Pacific Whale Watch Association – here are their voluntary guidelines: https://www.pacificwhalewatchassociation.com/guidelines/	Low - FYI	
TAC	General – on-going communucations	• [The BC Government] Tourism Branch would like to stay informed regarding the research underway, so we can proactively work with our industry stakeholders and the public to anticipate any changes in operating procedures or regulations that may result from the research findings.	Low - Communication	
TAC	Socio-economic impact assessment	• Southern Vancouver Island is a popular tourism destination for whale watching and restrictions could have economic impacts on the businesses operating within critical habitat areas. The 200 meter restriction will impact business operations and visitor experience – of which whale watching is a key motivating factor to trip planning in B.C.		

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
TAC		• Question: Are there opportunities for whale watching operators to get closer than 200 meters if they use alternate sources of power?		
BC Parks		**RE: Potential Management Implications in Robson Bight** 1) Even though it's a designated ecological reserve, the [P]rovince has no authority or enforcement powers to prevent vessels (powered or not) from entering the reserve. For this and other joint provincial-federal initiatives, having a Memorandum of Understanding (MoU) allowing provincial staff to enforce areas of federal jurisdiction would be a great step forward. [*The Province did note that there is a warden program in place that educates people in the area*]. 2) DFO itself continues to conduct test fisheries in and around the reserve waters, which at the very least looks terrible from a public relations standpoint even if it doesn't materially affect prey availability.		
Alanya Smith [MIRR]	General – First Nations Consultations	[In reviewing the amended recovery strategy and materials provided] there is no explicit mention of engagement that the federal government may have undertaken with Indigenous communities and governments with territories on the coast. B.C. is aware of the strong interests that coastal First Nations have in the health of the marine environment. In consideration of Canada and B.C.'s commitments to implement the UN Declaration on the Rights of Indigenous Peoples, B.C. encourages the federal government to undertake meaningful engagement with coastal First Nations in the development of the amended recovery strategy and in the communication of its final form and around its implementation.		

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Wong, Eva

From: Leslie, Karen
Sent: July-17-18 7:40 AM
To: Brekke, Heather
Subject: FW: Emergency protections for Southern Resident Killer Whales
Attachments: 2018 07 16 - Letter from Ecojustice to Ministers and Deputy Ministers - Protections for SRKW.pdf; ATT00001..htm

FYI

Karen Leslie
604-666-0395

-----Original Message-----
From: Webb, Cheryl
Sent: 2018–July-16 6:35 PM
To: Thomson, Andrew; Leslie, Karen; Davis, Neil; Harber, Lee
Subject: Fw: Emergency protections for Southern Resident Killer Whales

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Sanders , Michelle <michelle.sanders@tc.gc.ca>
Sent: Monday, July 16, 2018 6:19 PM
To: Winfield, Nicholas; D'Iorio, Marc (EC)
Cc: Stewart, Julie; Webb, Cheryl; Busby, Corina; Spicer, Mary-Ann (EC); Goodier, Gwen (EC)
Subject: Fw: Emergency protections for Southern Resident Killer Whales

See attached - latest from Ecojustice...in case it has not trickled down yet.

Let me know if you receive any direction on a response/approach. We have not yet.

Michelle

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Rascanin, Natasha <natasha.rascanin@tc.gc.ca>
Sent: Monday, July 16, 2018 8:54 PM
To: Hanson, Lawrence; Nichols, Megan; Sanders , Michelle
Cc: Masotti, Michael; Wasacz, Patrycja; Corbin, Claude
Subject: Fw: Emergency protections for Southern Resident Killer Whales

From: Keenan, Michael <michael.keenan@tc.gc.ca>

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Sent: Monday, July 16, 2018 8:45 PM
To: Dick, Robert; Rascanin, Natasha; Nichols, Megan; Corbin, Claude; Weldon, Jane; MacDonald, Lori; Pham, Thao; Little, Jennifer
Subject: Fwd: Emergency protections for Southern Resident Killer Whales

Begin forwarded message:

From: Dyna Tuytel <
Date: July 16, 2018 at 3:45:31 PM PDT
To: "min@dfo-mpo.gc.ca<mailto:min@dfo-mpo.gc.ca>" <min@dfo-mpo.gc.ca<mailto:min@dfo-mpo.gc.ca>>, "'ec.ministre-minister.ec@canada.ca<mailto:ec.ministre-minister.ec@canada.ca>'" <ec.ministre-minister.ec@canada.ca<mailto:ec.ministre-minister.ec@canada.ca>>, "catherine.blewett@dfo-mpo.gc.ca<mailto:catherine.blewett@dfo-mpo.gc.ca>" <catherine.blewett@dfo-mpo.gc.ca<mailto:catherine.blewett@dfo-mpo.gc.ca>>, "stephen.lucas@canada.ca<mailto:stephen.lucas@canada.ca>" <stephen.lucas@canada.ca<mailto:stephen.lucas@canada.ca>>, "Keenan, Michael" <michael.keenan@tc.gc.ca<mailto:michael.keenan@tc.gc.ca>>
Cc: Margot Venton , Olivia French
< Betty Gabel
< Jeffery Young
<>, Scott Wallace
<>, Christianne Wilhelmson
<>, Rachael Merrett
<, "Jasny, Michael"
< Misty MacDuffee
"Paul C. Paquet" Ross Dixon
, Hussein Alidina
, "Minister of Transport / Ministre des Transports (TC)" <TC.MinisterofTransport-MinistredesTransports.TC@tc.gc.ca<mailto:TC.MinisterofTransport-MinistredesTransports.TC@tc.gc.ca>>, "marlo.raynolds@canada.ca<mailto:marlo.raynolds@canada.ca>" <marlo.raynolds@canada.ca<mailto:marlo.raynolds@canada.ca>>, "McCloskey, Shane" <shane.mccloskey@tc.gc.ca<mailto:shane.mccloskey@tc.gc.ca>>
Subject: Emergency protections for Southern Resident Killer Whales

Dear Ministers LeBlanc and McKenna and Deputy Ministers Blewett, Lucas and Keenan,

Please find attached a letter on behalf of the David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation and WWF-Canada in response to the Ministers' letter of July 6 and recent announcements concerning Southern Resident Killer Whales.

Sincerely,

Dyna Tuytel and Margot Venton

Dyna Tuytel
Barrister & Solicitor | Ecojustice<http://www.ecojustice.ca/>
800-744 4th Avenue SW, Calgary, AB T2P 3T4
T: 403-705-0202 | 1-800-926-7744 ext. 307
F: 403-452-6574

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[redacted]

Ecojustice is Canada's largest environmental law charity. Help us build the case for a better earth.<https://www.support.ecojustice.ca/ea-action/action?ea.client.id=1943&ea.campaign.id=42200&ea.tracking.id=Outlook>

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Wong, Eva

From: Shaikh, Sharlene
Sent: July-17-18 4:09 PM
To: Brekke, Heather; Jones, Lisa Ann
Subject: DFO Email responses for RKW RSa External Review
Attachments: General Response_SS_17Jul18.docx; Immediate DFO response_ss_17Jul18.docx

Hi Heather,

Please find the two email responses Jonathan F. will be sending from the SARA inbox attached for your review.

Note that the immediate response email is for those who submitted letters and you have reviewed this text stating a more fulsome response is being prepared. We will need to send Jonathan the list of recipients.

The General Response email will be sent to everyone who has submitted correspondence and includes the key themes you laid out. I developed this based on the Q&A doc. What do you think about including a link to the Ford et al. (2017) paper and/or the web link to other DFO initiatives on SRKW.

Cheers,
Sharlene

Sharlene Shaikh
Biologist, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
sharlene.shaikh@dfo-mpo.gc.ca
Tel: 604-666-3811

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Hello,

Thank you for participating in the 30-day online external review on the draft *Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada* held from June 12 – July 11, 2018 which included updates to the critical habitat for Resident Killer Whales based on science advice published in 2017 (referenced below). Your feedback will be considered and any necessary changes will be incorporated into the document accordingly.

Comment [D1]: A comment was provided requesting a link to the science references.

I know this is laid out in the RS itself but let me know if useful to include here. Link is below.

Please note that input can still be provided on the draft amended recovery strategy as part of a 60-day national public comment period once the document is posted on the Species at Risk Public Registry. The public comment period commences on August 20, 2018 and ends on November 18, 2018.

Additionally, due to numerous concerns raised during the review period, we would like to take this opportunity to clarify that the current 2018 fishing closures, implemented through the *Fisheries Act*, and in effect within Juan de Fuca Strait, the Gulf Islands, and the mouth of the Fraser River, are not the result of critical habitat protection. While there is spatial overlap between existing Resident Killer Whale critical habitat and the fishery management measures the Department recently put in place in key Southern Resident Killer Whale foraging areas, these current fishing measures are not directly related to this specific review process on the amended Recovery Strategy. Critical habitat designation does not lead to the automatic prohibition of human activities occurring within its boundaries.

Kind regards,

Karen Leslie

Regional Manager, Species at Risk Program

Fisheries and Oceans Canada / Government of Canada

Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

Ford *et al.* (2017) publication reference:

http://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2017/2017_011-eng.html

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Hello

Thank you for your input in the external review process of the draft Amended Recovery Strategy for Northern and Southern Resident Killer Whales. We are reviewing your questions and comments and will provide a more fulsome response as soon as we can.

Thank you for your patience.

Kind regards,

Karen Leslie
Regional Manager, Species at Risk Program
Fisheries and Oceans Canada / Government of Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

s.19(1) s.21(1)(b)

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Wong, Eva

From: Jones, Lisa Ann
Sent: July-17-18 4:07 PM
To: Brekke, Heather
Subject: BN for your review
Attachments: MECTS-#XXXXXX-Proposed_RKW_Recovery_Strategy_for HB after KL.DOCX

Hi Heather,

Here is the revised version.

[redacted]

If you have any further thoughts on this Nov/Dec timing for the CHO that would be appreciated.

Cheers
Lisa

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

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s.21(1)(a)

s.21(1)(b)

Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region | Région du Pacifique

Regional Director General | Directrice générale régionale

UNCLASSIFIED
2018-XXX-XXXXX
EKME # XXXXXXX

MEMORANDUM FOR THE REGIONAL DIRECTOR GENERAL, PACIFIC

REGIONAL APPROVAL OF THE PROPOSED AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE
(FOR DECISION)

SUMMARY OF ADVICE TO THE REGIONAL DIRECTOR GENERAL

[redacted]

Field Code Changed

.../2

Canada

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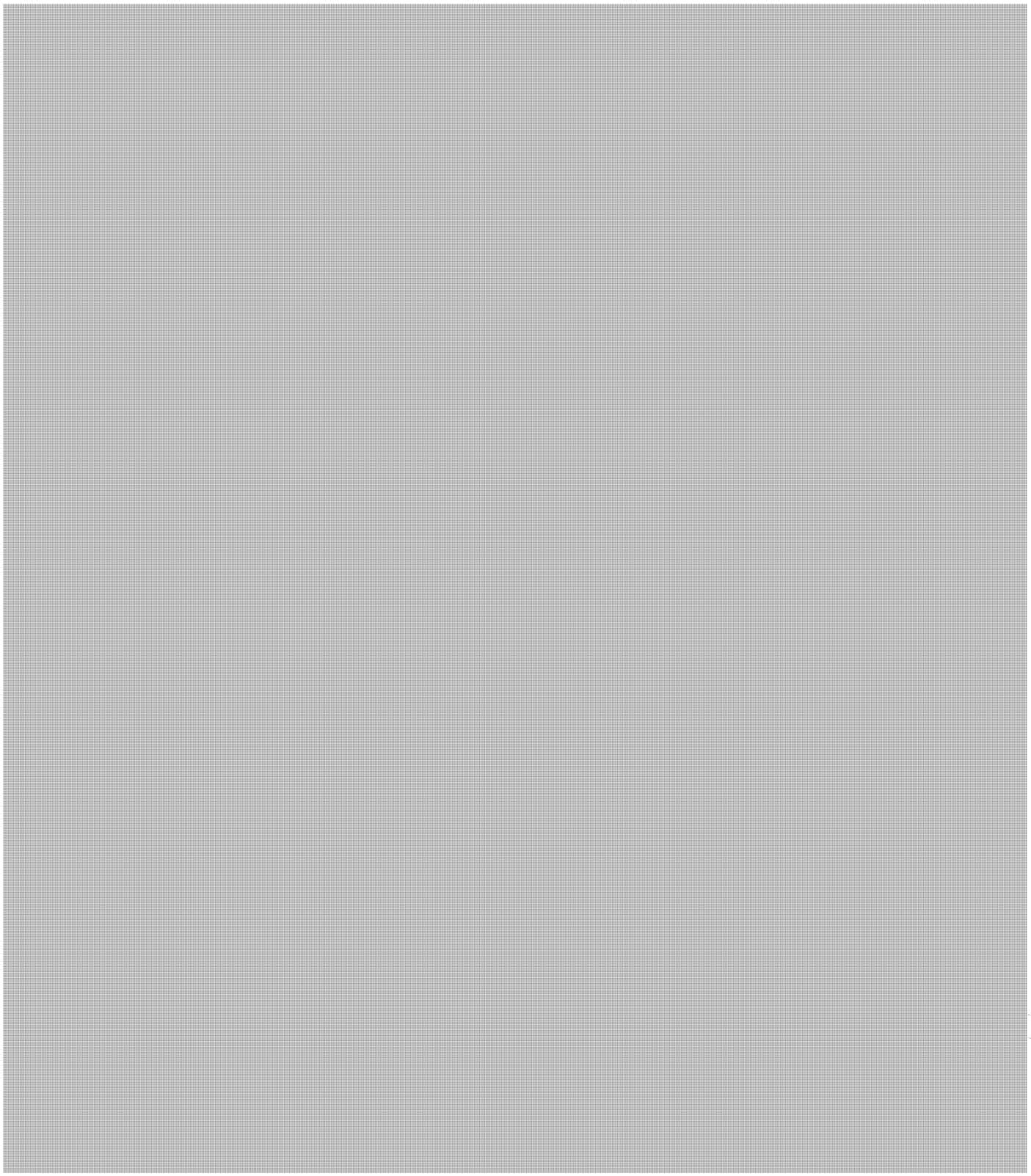
s.21(1)(a)

s.21(1)(b)



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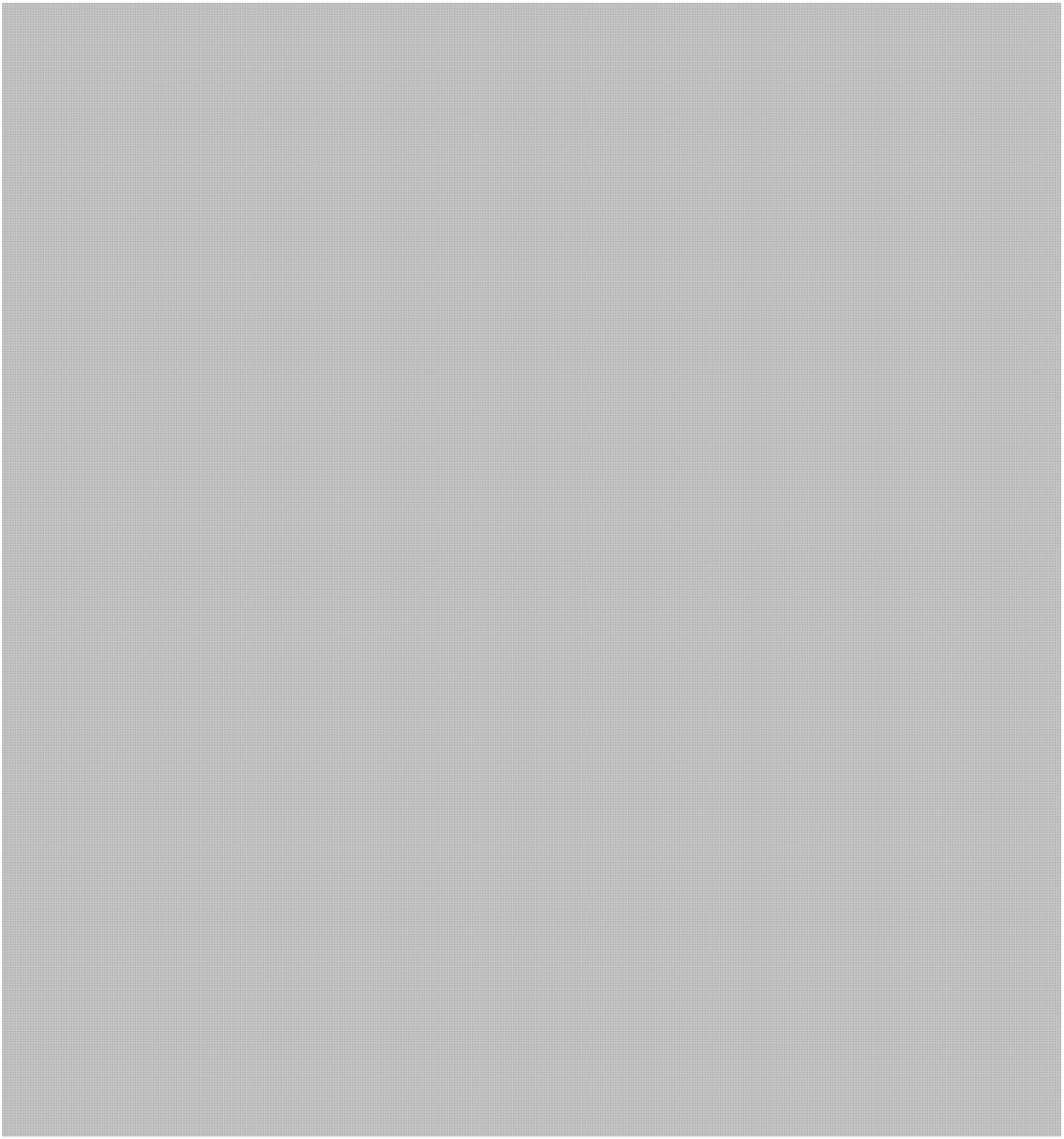
s.21(1)(a)

s.21(1)(b)



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s.21(1)(a)

s.21(1)(b)

[redacted]

Cheryl Webb
Regional Director
Ecosystems Management Branch

☐ I concur with the recommendations

☐ I do not concur with the recommendations

Rebecca Reid
Regional Director General
Pacific Region

Attachment(s): (1)

1) Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada [PROPOSED]
2) External Review of the Draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Oricinus orca*) in Canada: Consultation Summary

2018-505-00045 – Regional Consultation of the Draft Amended Recovery Strategy for Northern and Southern Resident Killer Whales
Lisa Jones, 604-666-2792, Species at Risk Recovery Planner/ N. Davis / db

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Fisheries and Oceans Canada
Correspondence Routing Slip

Fiche d'acheminement de correspondance
Pêches et Océans Canada

UNCLASSIFIED
GCCMS # : 2018-505-00045
EKME # : 3920518

To:
Pour: Rebecca Reid

Date:

Object: **REGIONAL APPROVAL OF THE PROPOSED AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE**
Objet:

From / De: Cheryl Webb, Regional Director, Ecosystems Management Branch

Additional Approvals:
Autre(s) approbation(s):

☐	Material for the Minister Documents pour le Ministre	X	Your Signature Votre signature	☐	Information

Screen:
Filtre:

The Department has assessed this issue in full.

- ☒ It contains no reference to matters covered by the screen relating to J.D. Irving Limited.
- ☐ It contains matters referenced in the screen relating to J.D. Irving Limited, but in our view does not engage the screen.
- ☐ In our view, the screen relating to J.D. Irving Limited should be engaged.

Remarks:
Remarques:

This briefing note was developed in consultation with the following regions/sectors:

Neil Davis, Director, Resource Management

Andrew Thomson, Regional Director, Fisheries Management

Carmel Lowe, Regional Director, Science

Comment [LJ3]: POLICY?

Distribution:

Drafting Officer/ Rédacteur: LISA JONES (604-666-2792) / Neil Davis / db

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Dozie, Juachi

From: Brekke, Heather
Sent: July-17-18 2:59 PM
To: Jones, Lisa Ann
Subject: FW: Potential input to ECHO online whale training tutorial for mariners- Module 1
Attachments: Storyboard-Whales-Mod1-V0.4_ECHO.DOCX

Want to take a first crack at review?

From: Robinson, Orla [mailto
Sent: July-17-18 2:49 PM
To: Brekke, Heather
Cc: Lim, Rangyn
Subject: Potential input to ECHO online whale training tutorial for mariners- Module 1

Hi Heather,

I am hoping to seek your assistance on a current project that the ECHO Program and BC Ferries is working closely together on. As you may recall from our last AWG meeting and project updates, Leslie had mentioned the development of an online training tutorial, called "Whales in our Waters", to help mariners identify cetaceans and navigate safely around them.

BC Ferries has been leading the project with ECHO's assistance on the marine mammal sections of the module. We have also partnered with Lance Barrett-Lennard and his CORI team to help confirm and review the species identifications sections of the tutorial. Given that we also provide some background context in the tutorial around Canadian and US regulations/SARA etc. and reference recent regulatory changes and requirements, it would be extremely valuable to have your lens on reviewing the accuracy and information presented and I was wondering if you might be open to a short review from the Canadian perspective? Lynne Barre from NOAA will be reviewing from US perspective.

I attach Module 1 which is a word document with approximately 6 slides and pop ups. If pressed for time, the main pages that reference legislation and that we would appreciate your feedback on are from Page 5 -8. We are aiming to have feedback on this module in the coming week, by July 24th. Apologies for short notice but we would be appreciative of any comments, edits or suggestions that you could offer by then – please feel free to track changes as needed.

We would of course be more than happy to acknowledge DFO as a reviewer and could credit DFO accordingly, as you see fit. Leslie has also reached out to Paul Cottrell to help with the review of a different module (Module 5), which provides information on reporting for marine mammals in distress.

Thanks for your consideration of this request. Please let me know if you have any questions.
Thanks,

Orla

Orla Robinson M.Sc.
Program Manager, ECHO Program

PORT of vancouver

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s.19(1)

Vancouver Fraser Port Authority
100 The Pointe, 999 Canada Place
Vancouver, B.C. Canada V6C 3T4

P: 604.665.9106
Cell: [redacted]
portvancouver.com

Pages 226 to / à 248

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pages 182 to / à 204

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Dozie, Juachi

From: Harber, Lee
Sent: July-17-18 1:48 PM
To: Davis, Neil
Subject: RE: Revised Timelines / Approvals

Hi Neil,

I was thinking Thursday by noon I would have a package ready to go out. Is this reasonable? Might be able to do EOD Weds but questions are taking a bit longer than anticipated.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Davis, Neil
Sent: 2018–July-17 1:46 PM
To: Harber, Lee
Subject: Re: Revised Timelines / Approvals

Hi Lee

When do you think we will be ready to share the draft mtg materials w the DG committee for our mtg on Fri morning?

Thx
Neil

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Harber, Lee
Sent: Tuesday, July 17, 2018 12:43 PM
To: Jones, Lisa Ann; Pelton, Jeff (jeff.pelton@tc.gc.ca); Henneman, Sonja (Sonja.Henneman@tc.gc.ca); Lafrance, Christian (christian.lafrance@tc.gc.ca); Marshall, Christopher (EC) (christopher.marshall@canada.ca); Spicer, Mary-Ann (EC) (mary-ann.spicer@canada.ca); Muise, Anna-Marie (EC)
Subject: Revised Timelines / Approvals

Hi everyone,

As per discussion this morning, here are the updated key dates and timelines. More updated materials to come tomorrow (i.e. ToR, Agenda, Summary Report + Q&A). Key check-in on Friday with DG's and then I will send back out revised versions for your respective DG's approval by next Tuesday.

Lastly, I will be starting up a PowerPoint presentation for the updates section of the agenda (i.e. MMR's, Critical Habitat, Lateral Displacement/Slowdown Trials). This will be part of the approvals package for DG's).

SRKW multi-stakeholder and Indigenous Advisory Group - Timeline and Approval Process

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	Item	Dept.	Deadline
1	Secretariat (DFO, TC, ECCC) review of: • Draft Terms of Reference • June 22 meeting summary report & assigned questions • Meeting Agenda	All departments	July 17 (Tuesday)
2	Call with interdepartmental executive group (DG / Director – Regional Director level)	**DFO:** Andy Thomson (Chair), Cheryl Webb & Neil Davis **ECCC:** Marc D'Iorio **TC:** Michelle Sanders (NHQ) & Yvette Myers (PAC)	July 20 (Friday AM)
3	DFO Pacific to send out updated materials to Departments based on direction from DG meeting.	DFO Pacific Region	July 20 (Friday PM)
4	Check-in with RDG Pacific Region	DFO Pacific Region	July 23 (Monday)
5	Approval of meeting materials by respective departments senior officials i.e. DG level	All departments	July 24 (Tuesday)
6	Finalize materials and send to meeting package to participants	DFO Pacific Region	July 25 (Wednesday)
7	Pre-brief with RDG Pacific Region	DFO Pacific Region	July 27 (Friday)
8	SRKW Indigenous and Multi-Stakeholder Advisory Group Meeting	All departments	July 30 (Monday)

Thank you
lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

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Dozie, Juachi

From: Harber, Lee
Sent: July-17-18 4:05 PM
To: Leslie, Karen; Brekke, Heather; Gallant, Nicole; MacConnachie, Sean; Eros, Carole; Moore, Kendra; Johansen, Jeff; Spence, Brenda; Cottrell, Paul; Nener, Jennifer; Cauffope, Genevieve; Galbraith, Ryan; Ho, Agatha; Hayes, Trish; Chmelnitsky, Elly; Malikian, Janine; Thar, Jonathan; Silverstein, Adam
Cc: Thomson, Andrew; Webb, Cheryl; Davis, Neil
Subject: Upcoming SRKW OPS Committee
Attachments: SRKW Ops Committee Meeting Notes - July 9.docx

Hi everyone,

As per Outlook update, the SRKW Ops Committee meeting series has been moved to every Thursday from 9:30-10AM. I've attached the meeting notes from last week.

For this Thursday:

Agenda
Standing Items:

- Update: new proposed RKW Critical Habitat Consultations (Heather) +
  - Recreational Fishery developments (Carole)
- Update: SRKW Advisory Group (lee)

Other items:

- Discussion for future fishery management considerations (Neil)
- Discussion on coordination of web information related to SRKW in region and NHQ (Communications)

Please send me any proposed agenda items by 4PM Wednesday (tomorrow).

Thanks
lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

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SRKW Ops Committee Meeting – Monday July 9

Chair: Neil

On Phone: Sean MacConnachie, Kendra Moore (did i miss anyone??)
In person: Heather Brekke, Paul Cottrell, Jeff Grout, Jonathan Thar, Genevieve Caffaupe, Neil Davis, Lee Harber

1. **Context / intro - Neil Davis**

This group is meant to act as an information clearing house for:

- Latest developments on who is doing what, work underway/planned all right players involved, coordinating/integration
- Flag what work and who needs to be involved, but not to do the work itself
- Lee Harber will be coordinating the Agendas
- Directors to attend as needed - opportunity to seek direction from senior management
- Attend as needed, when/where relevant based on agenda
- If necessary, will tweak time / frequency as needed

2. **Update on SRKW Multi-Stakeholder and Indigenous Advisory Group (lee)**

- Upcoming meeting on July 30 to formalize the group.
- Developing terms of reference, mtg summary report from June 22 and agenda for July 30 mtg.
    - Plan to post documents on regional share drive and also distribute to operations committee as needed.
- Science advisory sub-committee is being considered – scope and membership will need to be carefully considered.
- May be able to address questions / provide advice to the Advisory committee

3. **Heather – Update on new proposed Critical Habitat under RKW Recovery Strategy**

- Recovery Strategy completed in 2008
- Amended recovery strategy: 30 day external review currently in final days.
- Section 7 critical habitat section of strategy: significant activity from proponents, confusion regarding CA and fishing closures, 2 new critical habitat what it means for sport fishing sector, misinformation in the media, letter writing campaigns, receiving feedback that is based on misinformation, updating website, Neil did interview on Friday
- Key sector that is concerned is Sport Fishing sector
- Rec fishing sector has requested to extend the deadlines - period of external review in advance of forward CCGI 60 day review. TBD

Action Items:

- Draft meeting notes / action items (lee)
- Find a place on regional share drive to post meeting notes and relevant documents
- Explore / provide information on a TC protocol that may serve as a useful model for taskings (Kendra)

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Mbarushimana, Jenny

From: Malikian, Janine
Sent: July-18-18 4:59 PM
To: Leslie, Karen; Brekke, Heather
Cc: Busby, Corina; Webb, Cheryl; Harber, Lee; Davis, Neil
Subject: RE: HEADS UP. FOCUS Magazine: "Vancouver's role in the chinook-sewage-orca death spiral"

Thanks Karen.

We got a heads-up from our colleague Karen Geiger about this as well.

We did receive a media request today from local CBC about the discharge of sewage into the Fraser contributing to the decline of Chinook, but since wastewater effluent is considered a deleterious substance under section 36(3) the Fisheries Act, we recommended that the reporter follow up with Environment and Climate Change Canada.

Janine

From: Leslie, Karen
Sent: July-18-18 11:43 AM
To: Malikian, Janine; Brekke, Heather
Cc: Busby, Corina; Webb, Cheryl; Harber, Lee; Davis, Neil
Subject: FW: HEADS UP. FOCUS Magazine: "Vancouver's role in the chinook-sewage-orca death spiral"

FYI, and possible action if this heats up further.

Karen Leslie
604-666-0395

From: Chamberlain, Jon
Sent: 2018–July-18 11:28 AM
To: Leslie, Karen
Subject: FW: HEADS UP. FOCUS Magazine: "Vancouver's role in the chinook-sewage-orca death spiral"

FYI – call me if you want to discuss further.

From: Chamberlain, Jon
Sent: July-18-18 11:27 AM
To: Lowe, Carmel; Kennedy, Eddy; Landry, Jean; Nadeau, Simon
Cc: Houston, Kim
Subject: FW: HEADS UP. FOCUS Magazine: "Vancouver's role in the chinook-sewage-orca death spiral"

Carmel et al.

Quick heads up - we've become aware of a recent article in a local Victoria magazine entitled "Vancouver's role in the chinook-sewage-orca death spiral" which may be gaining attention and momentum. The article raises some questions about DFO's science and role in SRKW and contaminant related issues. There are links to Sophie's recent publication attached, DFO's role in contaminant research and SRKW, and the Department's response to the Cohen recommendations.

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Today, Sophie Johannessen was contacted by Brian Riddell and Isobelle Pearce from the Pacific Salmon Foundation regarding the article – they all are working on the Salish Sea Marine Survival project so I assume that is the angle of interest. No further information available at this time.

In anticipation of further engagement, Sophie has copied Karen Geiger – regional science comms – on the information she sent below.

Next steps – we plan to monitor developments but take no specific measures at this time.

Please advise if actions should be stepped up and if further briefings required.

Thanks
jc

From: Johannessen, Sophia
Sent: July-18-18 10:47 AM
To: Geiger, Karen; Chamberlain, Jon
Cc: Hannah, Charles; Ross, Andrew
Subject: HEADS UP. FOCUS Magazine: "Vancouver's role in the chinook-sewage-orca death spiral"

Hi Karen and Jon,

As discussed. Sorry that it's not short, but I hope that the subheadings will help…

The July/August edition of FOCUS Magazine includes an article entitled: "Vancouver's role in the chinook-sewage-orca death spiral." Here is the link to the online version:
http://www.focusonvictoria.ca/july-august-2018/vancouvers-role-in-the-chinook-sewage-orca-death-spiral-r10/

There has been no media uptake yet, but there may be some, once more people see the FOCUS magazine article. The Pacific Salmon Foundation has requested some information on the topic from Sophie Johannessen as a result of the article. DFO does not come off well in the FOCUS article. DFO is actually doing more on this topic than the author of the article realized.

FOCUS Article Science Summary
The article brings together results published in four scientific papers from Puget Sound (Northwest Fisheries Science Center and University of Washington) and states that:

- (Study 1)The survival rate of juvenile chinook from rivers with contaminated estuaries was half that of juveniles from uncontaminated rivers.
- (Study 2) Effluent from secondary-treated municipal effluent (sewage) upstream of the contaminated estuaries and fish tissue collected downstream of the effluent [upstream too? It doesn't say] contained cocaine, antidepressants and other pharmaceuticals and personal care products, showing that juvenile chinook bioaccumulate these "chemicals of emerging concern."
- (Study 2) Although individual contaminants were not in high enough concentration in the fish to cause known effects, multiple chemicals in the mixture are capable of affecting the same physiological processes, so there could be a cumulative effect.
- -(Study 3) The contaminants together are causing "metabolic dysfunction" in juvenile chinook, which could contribute to the lower survival in contaminated rivers.
- -(Study 4) Low chinook populations have caused a decline in birth rate among Southern Resident killer whales

FOCUS Article Comments about DFO

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- "...Fraser River fisheries managers should be determining whether the impacts Meador measured in Washington estuaries are at play in the Fraser estuary. But that's not happening."
- None of DFO's 98 proposed recovery actions for 3 whale species at risk relates to chemical contaminants in the Fraser River estuary.
- DFO "has been caught flat-footed on chemical contamination in the past," and has not acted on the 2011 Cohen recommendation to study effects of exposure to contaminants of concern [on sockeye, not Chinook, admittedly.] DFO spokesperson was "unable to confirm whether or not any DFO-affiliated scientist was investigating the impact of Fraser River estuary wastewater treatment plants or other sources of chemical contaminants on the survival rate of juvenile chinook."

What DFO is actually doing

- 2012: no new in-house research has been conducted since then.
- 2015: DFO published an assessment of the footprint of municipal effluent on the Strait of Georgia as a whole (not Fraser River), with some detailed analysis of effects on benthos in the immediate receiving environment (Johannessen et al., 2015; attached), using data collected before the contaminants research ban.
- 2013-present: DFO scientists are participating in a large US-Canadian program led in Canada by the Pacific Salmon Foundation -the Salish Sea Marine Survival Program -whose goals are to determine the causes of decline of coho and chinook salmon and to assess opportunities for recovery. This has not included any contaminants research on the Canadian side of the border so far, because DFO didn't have any contaminants scientists to do it, but it has included research into many other facets of marine survival of juvenile and adult salmon.
- **2017-18: DFO's National Contaminants Advisory Committee has funded external research by Peter Ross (Vancouver Aquarium) and Frank Gobas (Simon Fraser University) into current concentrations in and likely health effects of PCBs, PBDEs (brominated flame retardants) and other persistent organic pollutants in chinook salmon and killer whales. This work has produced a preliminary report to NCAG and will be published soon.**
- 2018: DFO announced a new program of research into contaminants in killer whales and beluga whales; three new staff will be hired this year, including a Research Scientist.
- Today: S. Johannessen was contacted by Pacific Salmon Foundation for information about this situation and is going to read and assess the four scientific articles cited by FOCUS Magazine.

Sophie

Sophia Johannessen, Ph.D.
Research Scientist
Institute of Ocean Sciences
Fisheries and Oceans Canada
9860 W. Saanich Rd., P.O. Box 6000
Sidney, B.C., Canada, V8L 4B2
Tel.: (250) 363-6616
Fax: (250) 363-6310
email: sophia.johannessen@dfo-mpo.gc.ca

Chercheur
Institut des Sciences de la Mer
Pêches et Océans Canada
Boîte postale 6000, Sidney, C.-B. V8L 4B2 Canada
Tél.: (250) 363-6616
Fax: (250) 363-6310
Courriel : sophia.johannessen@dfo-mpo.gc.ca

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Khanna, Sukriti

From: Brekke, Heather
Sent: July-18-18 10:57 AM
To: Shaikh, Sharlene; Fershau, Jonathan; Jones, Lisa Ann
Subject: FW: Draft_Reply_2018-001-01293.docx
Attachments: MECTS-#3934501-v1-Draft_Reply_2018-001-01293 KL.docx

FYI – example of MINO response letter.

From: Leslie, Karen
Sent: July-13-18 9:41 AM
To: pac.prmc / pac.urpcm (DFO/MPO)
Cc: Brekke, Heather
Subject: RE: Draft_Reply_2018-001-01293.docx

Hi Candace –

Please see my revisions attached.

Additional approvals should be myself, Jeff Grout, Cheryl Webb.

Karen Leslie
604-666-0395

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: 2018–July-12 1:06 PM
To: Leslie, Karen
Subject: Draft_Reply_2018-001-01293.docx
Importance: High

Hi Karen.

In Heather Brekke's absence, can you please have a look at the reply we have drafted in response to a number of letters re: timing of External Review consultation. These four incoming letters all address this issue, but some (esp. 001-01303) raise other topics as well; do you think each incoming should be sent a tailored reply? Also, who else needs to approve?

We're looking for your approval on this draft response **by 1pm Friday, but sooner if at all possible.**

Please use track changes to insert any necessary edits in the attached document, and FORWARD the document to XPAC PRMCU.

Your review should also include technical accuracy and consistency with policy direction.

If you think someone else in Pacific Region or in Legal Services must approve and they aren't on our approval list, **please advise us ASAP and we will forward the documents for their approval**.

Thanks,

Alison

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****Please direct all e-mails regarding ministerial correspondence to XPAC PRMCU.****

Candace McGuire, Heather Fowlie & Alison Jacques

Managers, Pacific Region Ministerial Correspondence Unit
Fisheries and Oceans Canada/Government of Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

Gestionnaires de la correspondance ministériel
Pêches et Océans Canada/Gouvernement du Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

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Ministerial Correspondence / Correspondance ministérielle Approval Form / Formulaire d'approbation

MCCU DOCKET # / N° DU DOSSIER UCCM : 2018-001-01293	MCCU CONTACT / RESPONSABLE À L'UCCM :
REPLY BY DEPARTMENT/ RÉPONSE DU MINISTÈRE	

DATE AND DEADLINES / DATE ET ÉCHÉANCE

DUE DATE TO MINO / ÉCHÉANCE AU CM : (mm-dd-yyyy / mm-jj-aaaa)	/2018	DATE RECEIVED IN MCCU / DATE DE RÉCEPTION À L'UCCM : (mm-dd-yyyy / mm-jj-aaaa)	/2018

COMMENTS / APPROACH – COMMENTAIRES / APPROCHE

APPROVALS / APPROBATIONS

Level / Niveau	Name, Title and Sector / Nom, titre et secteur	Assigned Date / Date fixée	Date Due / Échéance	Date Approved / Date d'approbation	Changes / Modifications
3 FM - SARA - Manager	Heather Brekke Acting Team Lead, Marine Species at Risk (SARA), Fisheries Management Branch				
2 FAM - Resource	Neil Davis Director, Resource Mgmt. – Program Delivery, Fisheries Management Branch				
Regional Director / Directeur(trice) régional(e)	Andrew Thomson Regional Director, Fisheries Management Branch				
	Approvals needed in Ottawa? Yes / No				
IF NECESSARY / SI NÉCESSAIRE					
Regional Director General / Directeur(trice) général régional(e)	Rebecca Reid, Regional Director General, Pacific Region				
ADM / RDG / DC / CO / AC SMA / DGR / SA / BC / CA					
Indigenous Affairs / Affaires autochtones Legal / Services juridiques IGA / AI					
IF / SI PROVINCIAL / TERRITORIAL					
DM / SM					
PCO / BCP					

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ATTACHMENTS TO RESPONSE / PIÈCES JOINTES À LA RÉPONSE	

Field Code Changed

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s.19(1)

s.21(1)(a)

s.21(1)(b)

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Port Renfrew Chamber of Commerce

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Field Code Changed

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s.21(1)(a)

s.21(1)(b)

[redacted]

Thank you for writing. I appreciate the opportunity to respond to your concerns.

Yours sincerely,

Andrew Thomson
Regional Director
Fisheries Management Branch
Pacific Region

Cheryl Webb
Regional Director
Ecosystems Management
Pacific Region

b.c.c.: Heather Brekke

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s.21(1)(a)

s.21(1)(b)

Mbarushimana, Jenny

From: Leslie, Karen
Sent: July-18-18 11:52 AM
To: Brekke, Heather; Eros, Carole; Davis, Neil
Subject: RE: ROCS update for RKW aRS/CH

[redacted]

Karen Leslie
604-666-0395

From: Brekke, Heather
Sent: 2018–July-18 11:48 AM
To: Eros, Carole; Davis, Neil
Cc: Leslie, Karen
Subject: RE: ROCS update for RKW aRS/CH

[redacted]

From: Eros, Carole
Sent: July-18-18 11:47 AM
To: Brekke, Heather; Davis, Neil
Cc: Leslie, Karen
Subject: RE: ROCS update for RKW aRS/CH

HI All,

[redacted]

Carole

From: Brekke, Heather
Sent: July-18-18 10:25 AM
To: Davis, Neil
Cc: Leslie, Karen; Eros, Carole
Subject: ROCS update for RKW aRS/CH

Hi Neil,

Please see below for the ROCS update for this week. I've kept much of the language the same as last week's, removed some of the background, and updated with the current status and next steps.

Approval of the proposed Amended Recovery Strategy for Resident Killer Whales

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

The proposed *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada*, which includes new identified critical habitat areas as well as clarifications to existing critical habitat, has entered regional approvals. This approval process is expedited with approval within the Pacific region as well as within Parks Canada Agency sought by July 26 in order to meet the timelines committed following the May 24 statement that SRKW face an imminent threat to their survival and recovery. Once regional and national approvals are complete, the document will be posted as a proposed document on the Species at Risk public registry for a 60-day online national comment period, anticipated to start August 20, 2018. After the 60-day comment period closes, the Department has 30 days to complete revisions and post the document as a Final version on the SAR registry. This is anticipated to occur along with a critical habitat order providing the legal protection of this habitat to be posted in Canada Gazette II by December 2018. The external review of draft document concluded on July 11th. Over 690 comments were received during this external review including letters to the Minister and multiple media stories have reported on the issue. Regional staff have attended numerous meetings with recreational fishers, First Nations, local government officials, and others to address questions and outline the review process. The review prompted extensive negative reaction from the recreational fishing community, who raised concerns about that the expedited timeline resulted in consultations occurring within their busy fishing season as well as anxiety about the potential of further fishing closures that may result from the addition of new areas of Critical Habitat.

[redacted] Ecojustice submitted comments, including the concern that adding Critical Habitat through the process of amending the Recovery Strategy may be slower than implementing an Emergency Protection Order. DFO is planning to expedite the protection process by implementing the Critical Habitat order (through regulation) concurrent with the approval of the Amended Recovery Strategy by December 2018, which would largely address this concern.

Karen – please edit as appropriate.
Carole – statements above for the rec sector are largely taken from ROCS last week, but please modify where required.

Thank you,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

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Wong, Eva

From: Jones, Lisa Ann
Sent: July-18-18 2:25 PM
To: Brekke, Heather
Subject: FW: RKW amended Recovery Strategy - Approval for External Review

Here is the email – did not find an example so drafted this. Think this is for you to send to Karen and for her to use to send to the EA. I have tried to find out who the EA is but no reply yet – please check with Karen on this.

Lisa

==========

The 30-day regional external review process of the proposed *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada*, held jointly with the Parks Canada *Agency,* was completed on July 12, 2018. Based on feedback received, one minor change was incorporated.

Through this Briefing Note, we are now seeking regional approval for the Amended Recovery Strategy to be sent for Minister approval for posting as a Proposed Amended Recovery Strategy for a 60-day national public comment period on the SAR Public Registry.

The Briefing Note has been generated by Lisa Jones and reviewed and approved by Heather Brekke and Karen Leslie for submission into the system.

Routing for this Briefing Note is as follows:

- Enter into GCCMS by EMB EA
- Neil Davis, Director, Resource Management
- Carmel Lowe, Regional Director, Science
- Andrew Thomson, Regional Director, Fisheries Management
- Rebecca Reid, RDG

Attached to the Briefing Note "EXTERNAL REVIEW ON THE DRAFT AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE" are two documents:

- Attachment 1: Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada [PROPOSED]
- Attachment 2: External Review of the Draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Oricinus orca) in Canada: Consultation Summary

*NOTE: The proposed Amended Recovery Strategy will be moving through the Parks Canada Agency approval process to Helen Davies at the same time.

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Jones, Lisa Ann

From: Shaikh, Sharlene
Sent: July-18-18 11:34 AM
To: Brekke, Heather; Jones, Lisa Ann
Subject: RE: Quick question (please respond)

My top 5 would be (not prioritized):

- Monitoring and enforcement
- Identify specific areas important to RKW that could benefit from site-specific management action e.g. key foraging sites. Examples include: protected areas, temporal avoidance zones, acoustic refuges etc.
- Emergency response planning
- Interagency contaminant working group
- Evaluate and revise whale watching guidelines and/or regulations to reflect most recent understanding of effects of chronic physical disturbance.

From: Brekke, Heather
Sent: July-18-18 11:20 AM
To: Jones, Lisa Ann; Shaikh, Sharlene
Subject: Quick question (please respond)
Importance: High

What are the key recovery measures or needs that would support full recovery and survival of SRKW? (quick response required – no need to think long on this). What I am looking for are the KEY pieces in your view either from the Action Plan or that have been identified within the last year as needs. E.g. monitoring and enforcement…

Anything within the next 10 minutes is appreciated.

Thanks!
Heather

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Dozie, Juachi

From: Brekke, Heather
Sent: July-18-18 1:02 PM
To: Fershau, Jonathan
Subject: FW: Action Required: Upcoming Decisions for RDG, DM and Minister - Due July 24th noon
Attachments: Upcoming Decisions for RDG, DM and Minister - YTRA.xlsx

Hi Jonathan,

The only one coming through is the proposed aRS RKW. Aiming for getting into system today, and response by July 26.

TBD	RDG	Regional approval of the proposed Amended Recovery Strategy for Northern and Southern Resident Killer Whale (identifies new Critical Habitat)	K. Leslie	Jul-26-19	TBD (aiming for .

From: Leslie, Karen
Sent: July-18-18 12:10 PM
To: Brekke, Heather; Shepherd, Pippa; Kenyon, Robyn
Cc: Fershau, Jonathan
Subject: FW: Action Required: Upcoming Decisions for RDG, DM and Minister - Due July 24th noon

Hi all –

Please see attached. Can each of you please review and revise as appropriate for your teams, and provide to Jonathan to collate by end of week. I will review Monday. Please let me know if you have any questions or concerns.

K

Karen Leslie
604-666-0395

From: Fogliato, Cara
Sent: 2018–July-18 12:06 PM
To: XPAC EMB Mgrs
Subject: FW: Action Required: Upcoming Decisions for RDG, DM and Minister - Due July 24th noon

Good afternoon Managers,

Following the announcement of our new Minister, RDGO has asked that we update our list for upcoming decisions to the RDG, DM, and MINO over the next six months.

Please kindly review the EMB tab of the attached list and provide updates for the next 6 months – July to December 2018. Please remove decisions that are no longer active. Please provide your input to me by **COB Monday July 23rd**. When returning your submissions please highlight new editions.

Thank you,

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Mark Johal on behalf of:

Cara Fogliato
Executive Assistant to Regional Director, Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Cara.Fogliato@DFO-mpo.gc.ca / Tel: 604-666-6285

From: Johal, Sharan
Sent: July-18-18 11:56 AM
To: Barton, Meagan; Campbell, Erin; Domke, Jennalee; Fogliato, Cara; Ford, Leanne; Hodgkins, Vanessa; Lawrie, Kirsten; MacNeill, Jill; Naylor, Louise
Cc: Schwark, Valerie
Subject: Action Required: Upcoming Decisions for RDG, DM and Minister - Due July 24th noon

Hello everyone,

With the announcement of our new minister, we need to refresh our lists for upcoming decisions to the RDG, DM and MINO over the next 6 months (July to December). Please provide your updated lists to Valerie.Schwark@dfo-mpo.gc.ca by Tuesday, July 24th at noon. When returning your submissions please highlight new editions.

Please ensure to make updates to your group's tab and delete any decisions that have already been made.

Thank you,

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: Johal, Sharan
Sent: 2018–May-02 4:19 PM
To: Barton, Meagan; Campbell, Erin; Domke, Jennalee; Fogliato, Cara; Ford, Leanne; Hodgkins, Vanessa; Lawrie, Kirsten; MacNeill, Jill; Naylor, Louise
Subject: Input Required: Upcoming Decisions for RDG, DM and Minister

Good afternoon, if you could kindly review the attached list and provide updates for the next 6 months – May to October 2018. Please provide your input to me by COB Wednesday May 9th. When returning your submissions please highlight new editions.

Thank you

Sharan Johal

Executive Assistant to the Regional Director General, Regional Director General's Office
Fisheries and Oceans Canada/Government of Canada
sharan.johal@dfo-mpo.gc.ca/Tel: 604-666-1376/Fax: 604-666-8956

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Assistant Exécutif au Directrice Général Régional, Bureau du Directrice Général Regional
Pêches et Océans Canada/Gouvernement du Canada
sharan.johal@dfo-mpo.gc.ca/Tél: 604 666-1376/Télécopier: 604-666-8956

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Dozie, Juachi

From: Brekke, Heather
Sent: July-18-18 2:23 PM
To: Shaikh, Sharlene
Subject: FW: HEADS UP. FOCUS Magazine: "Vancouver's role in the chinook-sewage-orca death spiral"
Attachments: Johan et al wastewater footprint STOTEN 2015.pdf

FYI – you may want to review the details below that Sophie outlines. Three new science positions are being hired to deal with contaminants and whales (SRKW/Right whales/beluga)...

From: Leslie, Karen
Sent: July-18-18 11:43 AM
To: Malikian, Janine; Brekke, Heather
Cc: Busby, Corina; Webb, Cheryl; Harber, Lee; Davis, Neil
Subject: FW: HEADS UP. FOCUS Magazine: "Vancouver's role in the chinook-sewage-orca death spiral"

FYI, and possible action if this heats up further.

Karen Leslie
604-666-0395

From: Chamberlain, Jon
Sent: 2018–July-18 11:28 AM
To: Leslie, Karen
Subject: FW: HEADS UP. FOCUS Magazine: "Vancouver's role in the chinook-sewage-orca death spiral"

FYI – call me if you want to discuss further.

From: Chamberlain, Jon
Sent: July-18-18 11:27 AM
To: Lowe, Carmel; Kennedy, Eddy; Landry, Jean; Nadeau, Simon
Cc: Houston, Kim
Subject: FW: HEADS UP. FOCUS Magazine: "Vancouver's role in the chinook-sewage-orca death spiral"

Carmel et al.

Quick heads up - we've become aware of a recent article in a local Victoria magazine entitled "Vancouver's role in the chinook-sewage-orca death spiral" which may be gaining attention and momentum. The article raises some questions about DFO's science and role in SRKW and contaminant related issues. There are links to Sophie's recent publication attached, DFO's role in contaminant research and SRKW, and the Department's response to the Cohen recommendations.

Today, Sophie Johannessen was contacted by Brian Riddell and Isobelle Pearce from the Pacific Salmon Foundation regarding the article – they all are working on the Salish Sea Marine Survival project so I assume that is the angle of interest. No further information available at this time.

In anticipation of further engagement, Sophie has copied Karen Geiger – regional science comms – on the information she sent below.

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Next steps – we plan to monitor developments but take no specific measures at this time.

Please advise if actions should be stepped up and if further briefings required.

Thanks
jc

From: Johannessen, Sophia
Sent: July-18-18 10:47 AM
To: Geiger, Karen; Chamberlain, Jon
Cc: Hannah, Charles; Ross, Andrew
Subject: HEADS UP. FOCUS Magazine: "Vancouver's role in the chinook-sewage-orca death spiral"

Hi Karen and Jon,

As discussed. Sorry that it's not short, but I hope that the subheadings will help...

The July/August edition of FOCUS Magazine includes an article entitled: "Vancouver's role in the chinook-sewage-orca death spiral." Here is the link to the online version:
http://www.focusonvictoria.ca/july-august-2018/vancouvers-role-in-the-chinook-sewage-orca-death-spiral-r10/

There has been no media uptake yet, but there may be some, once more people see the FOCUS magazine article. The Pacific Salmon Foundation has requested some information on the topic from Sophie Johannessen as a result of the article. DFO does not come off well in the FOCUS article. DFO is actually doing more on this topic than the author of the article realized.

FOCUS Article Science Summary
The article brings together results published in four scientific papers from Puget Sound (Northwest Fisheries Science Center and University of Washington) and states that:

- (Study 1)The survival rate of juvenile chinook from rivers with contaminated estuaries was half that of juveniles from uncontaminated rivers.
- (Study 2) Effluent from secondary-treated municipal effluent (sewage) upstream of the contaminated estuaries and fish tissue collected downstream of the effluent [upstream too? It doesn't say] contained cocaine, antidepressants and other pharmaceuticals and personal care products, showing that juvenile chinook bioaccumulate these "chemicals of emerging concern."
- (Study 2) Although individual contaminants were not in high enough concentration in the fish to cause known effects, multiple chemicals in the mixture are capable of affecting the same physiological processes, so there could be a cumulative effect.
- -(Study 3) The contaminants together are causing "metabolic dysfunction" in juvenile chinook, which could contribute to the lower survival in contaminated rivers.
- -(Study 4) Low chinook populations have caused a decline in birth rate among Southern Resident killer whales

FOCUS Article Comments about DFO

- "...Fraser River fisheries managers should be determining whether the impacts Meador measured in Washington estuaries are at play in the Fraser estuary. But that's not happening."
- None of DFO's 98 proposed recovery actions for 3 whale species at risk relates to chemical contaminants in the Fraser River estuary.
- DFO "has been caught flat-footed on chemical contamination in the past," and has not acted on the 2011 Cohen recommendation to study effects of exposure to contaminants of concern [on sockeye, not Chinook, admittedly.] DFO spokesperson was "unable to confirm whether or not any DFO-affiliated scientist was investigating the impact of Fraser River estuary wastewater treatment plants or other sources of chemical contaminants on the survival rate of juvenile chinook."

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What DFO is actually doing

- 2012: [redacted] so no new in-house research has been conducted since then.
- 2015: DFO published an assessment of the footprint of municipal effluent on the Strait of Georgia as a whole (not Fraser River), with some detailed analysis of effects on benthos in the immediate receiving environment (Johannessen et al., 2015; attached), using data collected before the contaminants research ban.
- 2013-present: DFO scientists are participating in a large US-Canadian program led in Canada by the Pacific Salmon Foundation -the Salish Sea Marine Survival Program -whose goals are to determine the causes of decline of coho and chinook salmon and to assess opportunities for recovery. This has not included any contaminants research on the Canadian side of the border so far, because DFO didn't have any contaminants scientists to do it, but it has included research into many other facets of marine survival of juvenile and adult salmon.
- **2017-18: DFO's National Contaminants Advisory Committee has funded external research by Peter Ross (Vancouver Aquarium) and Frank Gobas (Simon Fraser University) into current concentrations in and likely health effects of PCBs, PBDEs (brominated flame retardants) and other persistent organic pollutants in chinook salmon and killer whales. This work has produced a preliminary report to NCAG and will be published soon.**
- 2018: DFO announced a new program of research into contaminants in killer whales and beluga whales; three new staff will be hired this year, including a Research Scientist.
- Today: S. Johannessen was contacted by Pacific Salmon Foundation for information about this situation and is going to read and assess the four scientific articles cited by FOCUS Magazine.

Sophie

Sophia Johannessen, Ph.D.
Research Scientist
Institute of Ocean Sciences
Fisheries and Oceans Canada
9860 W. Saanich Rd., P.O. Box 6000
Sidney, B.C., Canada, V8L 4B2
Tel.: (250) 363-6616
Fax: (250) 363-6310
email: sophia.johannessen@dfo-mpo.gc.ca

Chercheur
Institut des Sciences de la Mer
Pêches et Océans Canada
Boîte postale 6000, Sidney, C.-B. V8L 4B2 Canada
Tél.: (250) 363-6616
Fax: (250) 363-6310
Courriel : sophia.johannessen@dfo-mpo.gc.ca

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This article is available online - https://www.sciencedirect.com/science/article/pii/S0048969714016970

Science of the Total Environment 508 (2015) 228–239

Contents lists available at ScienceDirect

Science of the Total Environment

journal homepage: www.elsevier.com/locate/scitotenv

Local environmental conditions determine the footprint of municipal effluent in coastal waters: A case study in the Strait of Georgia, British Columbia

Sophia C. Johannessen [a,*], Robie W. Macdonald [a], Brenda Burd [b], Albert van Roodselaar [c,1], Stan Bertold [c,2]

[a] Institute of Ocean Sciences, Fisheries and Oceans Canada, 9860 W. Saanich Rd., P.O. Box 6000, Sidney, BC V8L 4B2, Canada
[b] Ecostat Research Ltd., 1040 Clayton Rd., N. Saanich, BC V8L 5P6, Canada
[c] Metro Vancouver, 4330 Kingsway, Burnaby, BC V5H 4G8, Canada

HIGHLIGHTS

- Municipal wastewater fluxes are compared to regional geochemical budgets.
- Wastewater contributes <1.5% of organic C, N, and oxygen demand in the Strait.
- Wastewater contributes <10% of metals and PCBs captured in the sediment.
- Wastewater contributes about 60% of PBDEs captured in the sediment.
- Effects on benthos are limited to 1–10 km and result from organic carbon flux.

ARTICLE INFO

Article history:
Received 30 September 2014
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Editor: D. Barcelo

Keywords:
Municipal effluent
Geochemical budgets
Organic carbon
Nitrogen
Oxygen
Contaminants

ABSTRACT

To predict the likely effects of management action on any point source discharge into the coastal ocean, it is essential to understand both the composition of the effluent and the environmental conditions in the receiving waters. We illustrate a broadly-applicable approach to evaluating the comprehensive environmental footprint of a discharge, using regional geochemical budgets and nearfield monitoring. We take as a case study municipal effluent discharged into the Strait of Georgia (west coast of Canada), where there has been public controversy over the discharge of screened or primary-treated effluent directly into the ocean. Wastewater contributes ≤1% of the nitrogen, organic carbon and oxygen demand in the Strait and is unlikely to cause eutrophication, harmful algal blooms or hypoxia in this region. Metals (Hg, Pb, Cd) are controlled by natural cycles augmented by past mining and urbanization, with 0.3–5% of the flux contributed by wastewater. Wastewater contributes ~5% of PCBs but ≤60% of PBDEs and is likely also important for pharmaceuticals and personal care products. Effects of high organic flux on benthos are measurable in the immediate receiving environment. The availability of particle-active contaminants to enter the food chain depends on how long those contaminants remain in the sediment surface mixed layer before burial. Secondary treatment, slated for completion in Vancouver in 2030, will reduce fluxes of some contaminants, but will have negligible effect on regional budgets for organic carbon, nitrogen, oxygen, metals and PCBs. Removal of PBDEs from wastewater will affect regional budgets, depending on how the sludge is sequestered.

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1. Introduction

The coastal ocean links land with the open sea. Geochemical cycles driven by global-scale circulation are augmented in coastal waters by discharges from human activities on land that can have profound effects on local ecosystems. With limited resources managers have to decide how to prioritize possible actions to limit the effects of those activities.

Municipal wastewater is one highly visible discharge that carries a complex mixture of contaminants. In some parts of the world wastewater discharge has led to eutrophication, harmful algal blooms, hypoxia, extinctions of bottom fauna and fish mortality (Islam and Tanaka, 2004). However, the effects of wastewater discharge are not the same everywhere. For example, phosphates in household wastewater can have dramatic effects on lakes, causing eutrophication and harmful algal blooms, while anthropogenic phosphate has little effect on marine

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[1] Present address: 2787 Cultus Crt, Coquitlam, BC V3C5A8, Canada.
[2] Present address: 903-2288 Pine Street, Vancouver, BC V6J 5G4, Canada.

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Mbarushimana, Jenny

From: Eros, Carole
Sent: July-18-18 11:20 AM
To: Brekke, Heather; Davis, Neil
Cc: Leslie, Karen
Subject: RE: ROCS update for RKW aRS/CH

I agree it is associated with the timeline. If I am going to communicate/confirm the timeline with SFAB on Monday we may want to brief up to expect further reaction.

I am working to confirm where the John Horgan letter is.... No one seems to have it.

From: Brekke, Heather
Sent: July-18-18 11:13 AM
To: Davis, Neil
Cc: Leslie, Karen; Eros, Carole
Subject: RE: ROCS update for RKW aRS/CH

I would suggest the key change is that the timeline has been confirmed. I.e. we are not pushing the 60-day comment period back to align better with the fall availability.

From: Davis, Neil
Sent: July-18-18 11:12 AM
To: Brekke, Heather
Cc: Leslie, Karen; Eros, Carole
Subject: RE: ROCS update for RKW aRS/CH

Thanks Heather, I'll speak to this in ROCs this afternoon. It doesn't look like too much has changed since last week, so I don't think we'll need to submit a written update, so Karen and Carole, for now you can hold off on making further edits

Thx
Neil

From: Brekke, Heather
Sent: Wednesday, July 18, 2018 10:25 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>; Eros, Carole <Carole.Eros@dfo-mpo.gc.ca>
Subject: ROCS update for RKW aRS/CH

Hi Neil,

Please see below for the ROCS update for this week. I've kept much of the language the same as last week's, removed some of the background, and updated with the current status and next steps.

Approval of the proposed Amended Recovery Strategy for Resident Killer Whales

The proposed *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada*, which includes new identified critical habitat areas as well as clarifications to existing critical habitat, has entered regional approvals. This approval process is expedited with approval within the Pacific region as well as within Parks Canada Agency sought by July 26 in order to meet the timelines committed following the May 24 statement that

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SRKW face an imminent threat to their survival and recovery. Once regional and national approvals are complete, the document will be posted as a proposed document on the Species at Risk public registry for a 60-day online national comment period, anticipated to start August 20, 2018. After the 60-day comment period closes, the Department has 30 days to complete revisions and post the document as a Final version on the SAR registry. This is anticipated to occur along with a critical habitat order providing the legal protection of this habitat to be posted in Canada Gazette II by December 2018. The external review of draft document concluded on July 11th. Over 690 comments were received during this external review including letters to the Minister and multiple media stories have reported on the issue. Regional staff have attended numerous meetings with recreational fishers, First Nations, local government officials, and others to address questions and outline the review process. The review prompted extensive negative reaction from the recreational fishing community, who raised concerns about that the expedited timeline resulted in consultations occurring within their busy fishing season as well as anxiety about the potential of further fishing closures that may result from the addition of new areas of Critical Habitat.

Ecojustice submitted comments, including the concern that adding Critical Habitat through the process of amending the Recovery Strategy may be slower than implementing an Emergency Protection Order. DFO is planning to expedite the protection process by implementing the Critical Habitat order (through regulation) concurrent with the approval of the Amended Recovery Strategy by December 2018, which would largely address this concern.

Karen – please edit as appropriate.
Carole – statements above for the rec sector are largely taken from ROCS last week, but please modify where required.

Thank you,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

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Khanna, Sukriti

From: Harber, Lee
Sent: July-18-18 11:34 AM
To: Thomson, Andrew; Davis, Neil
Subject: draft agenda - SRKW advisory group
Attachments: Draft Agenda for July 30 mtgV3.docx

Hi Andy, Neil:

[redacted] or will senior managers present and be provide with speaking points, etc. Please see attached draft agenda.

Thanks
lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

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SOUTHERN RESIDENT KILLER WHALES
INDIGENOUS AND MULTI-STAKEHOLDER ADVISORY GROUP

AGENDA - ANNOTATED

Monday July 30, 2018 10:00 am- 12:00 pm
Location: 401 Burrard St. Room
2nd Floor, Boardroom C and D

Time	Agenda Item	Objective & Reference Materials	Presenter(s)
10:00AM – 10:25 *(25 mins)*	**Welcome, Opening Remarks & Introductions** • Opening Remarks • Review Agenda ○ Ratify Summary Report from first meeting	**Materials:** ○ **Draft Agenda** (distributed in advance of the meeting) ○ **Speaking points** for RR on: 1) key themes from summary report and 2) status of questions from first meeting Lead: Lee w/ input from ECCC and TC	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region
	Updates / Recent Developments 1. Update on MMR's 2. Update on New Critical Habitat: Amended RKW recovery strategy 3. Lateral Displacement in Strait of Juan de Fuca / Vessel Slow Down in Haro Strait	**Materials:** ○ **PowerPoint Presentation with Speaking Point Presenters on updates.** ○ **Hand-out's on updates** for group i.e. media lines and news release on MMRs Use off-the-shelf Communications products	Update 1: DFO Update 2: DFO Update 3: TC
10:15AM - 11:00AM *(35 mins)*	**Review draft Terms of Reference** • Key questions to steer discussion and feedback\ • Discussion on potential Science sub-advisory group	**Materials:** ○ **Draft ToR with embedded questions to steer discussion and input from participants** Lead: Lee w/ input from ECCC and TC	All participants
11:00AM - 11:15AM *(15 mins)*	**Presentation on Current Science Activities** • Overview of science activities underway that are supporting SRKW recovery	**Objective:** Information Sharing ○ **PowerPoint Presentation** Lead: DFO Science Branch	DFO Science
11:15AM - 11:50AM *(30 mins)*	**Roundtable Discussion on Forward Agenda for Advisory Group** • Identify priority areas for	**Discussion** Priorities areas for future discussion: ○ Topics identified by Group on	**All participants**

Comment [LH1]: Who will present these updates? RR or Tech expert

Comment [LH2]: Who will present? Carmel or Tech expert

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	information and discussion at future meetings.	June 22: • Compliance with recovery Measures • Setting Targets (short & long term). o Other important areas for consideration: • DFO/TC/ECCC to present	
11:50AM – 12:00PM *(10 mins)*	**Closing Remarks** o Next Steps o Action Items	**Objectives** • Identify next steps & action items	**Chair: Rebecca Reid** Regional Director General, DFO – Pacific Region

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Khanna, Sukriti

From: Harber, Lee
Sent: July-18-18 3:44 PM
To: Davis, Neil
Subject: draft materials - SRKW Advisory Group
Attachments: Approval Process and Timelines V2.docx; SRKW Indigenous and Multi-stakeholder Advisory Group DRAFT TOR V6.docx; Draft Agenda for July 30 mtgV3.docx; SRKW Technical Briefing and Roundtable - Summary ReportV5 input on QandA.docx

Hi Neil,

I've attached the drafts of the materials package for the call on Friday. The key items to foster discussion on Friday are in the first attachment.

1) Items for discussion / timelines table
2) Draft ToR
3) Draft Agenda
4) Draft Summary Report (June 22)

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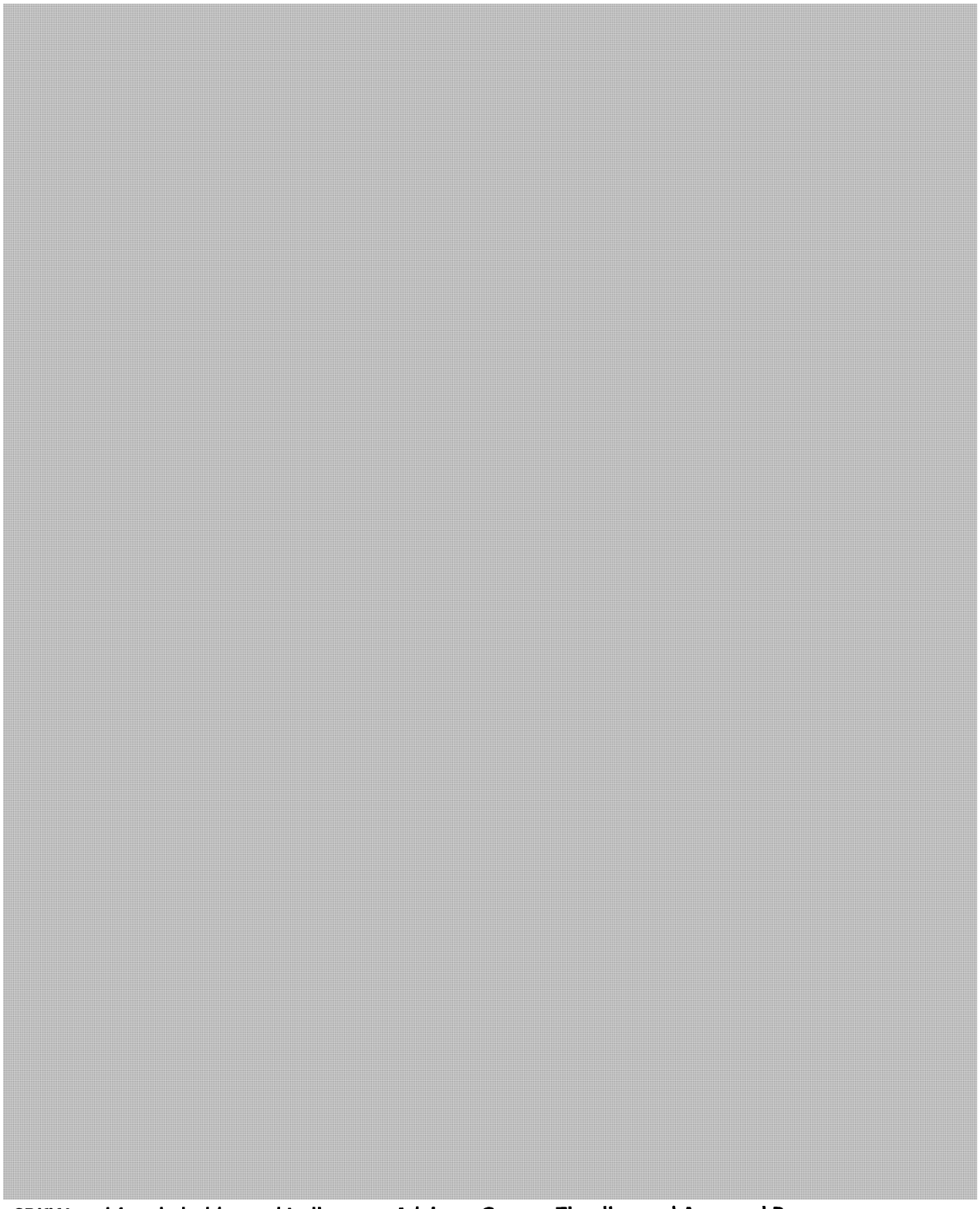
Items / Issues for Consideration:



SRKW multi-stakeholder and Indigenous Advisory Group - Timeline and Approval Process

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	Item	Dept.	Deadline
1	Secretariat (DFO, TC, ECCC) review of: • Draft Terms of Reference • June 22 meeting summary report & assigned questions • Meeting Agenda	All departments	July 17 (Tuesday)
2	Call with interdepartmental executive group (DG / Director – Regional Director level)	DFO: Andy Thomson (Chair), Neil Davis & Cheryl Webb ECCC: Marc D'Iorio TC: Michelle Sanders (NHQ) / Yvette Myers (PAC)	July 20 (Friday AM)
3	DFO Pacific to send out updated materials to Departments based on direction from DG meeting.	DFO Pacific Region	July 20 (Friday PM)
4	Check-in with RDG Pacific Region	DFO Pacific Region	July 23 (Monday)
5	Approval of meeting materials by respective departments senior officials i.e. DG level	All departments	July 24 (Tuesday)
6	Finalize materials and send to meeting package to participants	DFO Pacific Region	July 25 (Wednesday)
7	Pre-brief with RDG Pacific Region	DFO Pacific Region	July 27 (Friday)
8	SRKW Indigenous and Multi-Stakeholder Advisory Group Meeting	All departments	July 30 (Monday)

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SOUTHERN RESIDENT KILLER WHALES
INDIGENOUS AND MULTI-STAKEHOLDER ADVISORY GROUP

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11:50AM – 12:00PM *(10 mins)*	**Closing Remarks** o Next Steps o Action Items	**Objectives** • Identify next steps & action items	**Chair: Rebecca Reid** Regional Director General, DFO – Pacific Region

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Southern Resident Killer Whale
Indigenous and Multi-stakeholder Advisory Group

Terms of Reference
(DRAFT July 18, 2018)

1. BACKGROUND

As identified at the October 2017 Symposium for the Southern Resident killer whale (SRKW) and the recent *Whales Initiative* technical briefing and roundtable discussion on June 22, 2018, this Advisory Group has been established by the federal departments of Fisheries and Oceans Canada, Transport Canada, and Environment and Climate Change Canada to bring together Indigenous groups, multiple stakeholders, and implicated jurisdictions to facilitate communication and coordination of activities to recover SRKW.

This advisory group does not replace the Crown's Duty to Consult and accommodate nor does it replace the regular engagement and consultation on individual initiatives and measures related to SRKW recover.

2. PURPOSE

To facilitate communication and coordination of activities to recover SRKW and provide recommendations to federal departments of Fisheries and Oceans Canada, Transport Canada and Environment and Climate Change Canada on implementation of coordinated recovery measures.

3. OBJECTIVES

The main objectives of the advisory group will be to:

- Provide a forum for the participants to discuss actions underway and planned by federal departments and others to protect SRKW, and to allow participants to provide advice on planned recovery actions and to share information to help inform government decision-making.
- Promote dialogue and improve shared understanding of the complexities of SRKW recovery, shared responsibilities, and respective authorities of Advisory Group participants to reduce SRKW threats.
- Identify opportunities for collaboration and partnership that can advance the collective implementation of the recovery measures identified in the Species at Risk *Action Plan for Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada* (2017) and Oceans Protection Plan *Review of the Effectiveness of Recovery Measures for Southern Resident Killer Whales* (2017), and the measures announced under the federal *Whales Initiative* on June 22, 2018 to promote recovery of the species.

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Discussion question: Are there specific milestones or deliverables that you would like to identify under these objectives?

4. GOVERNANCE AND MEMBERSHIP

The Indigenous and Multi-stakeholder Advisory Group will consist of representatives from various Indigenous and stakeholder groups: indigenous communities, Non-Governmental Organizations (NGO), the shipping and marine transportation, fishing, and whale watching sectors, the Government of British Columbia, Metro Vancouver Regional District.

The Advisory Group will be chaired by the Regional Director General of Fisheries and Oceans Canada, with ex-officio participation of senior officials from Transport Canada and Environmental and Climate Change Canada.

Discussion question: Is there interest is having a non-federal co-chair and if yes then how would a non-federal co-chair be selected?

Any decisions on changes to membership will be decided by the chair/co-chairs with input from members of the Advisory Group.

If consensus is not achieved on a specific issue the Advisory Group secretariat will report out on the discussions that were held and that agreement was not achieved. In addition, meeting reports will identify alternative perspectives and present potential solutions and options for moving forward.

The federal departments may establish sub-advisory bodies that would provide advice to the Advisory Group on implementing and monitoring recovery measures to mitigate threats. The federal departments will seek the advice of the Advisory Group on the establishment of the scientific advisory body.

Discussion question: Is there interest in having a sub-advisory group? If so, what type of function would this group serve? E.g. science advice, traditional uses advice, socioeconomic analysis, etc.

5. RESPONSIBILITIES OF PARTICIPANTS

- Review circulated information to the best of one's capacity and time.
- Participate in meetings or assign alternate to attend.
- Engage in open and respectful dialogue, seeking to understand and be understood.
- Communicate out to their respective organizations/communities the activities and outcomes of this Advisory Group.

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6. MEETING PROCESS

The Advisory Group is anticipated to meet quarterly, however this may be adjusted by the chair/co-chair, if needed. Teleconferencing and video conferencing will be used where possible to minimize travel demands.

Discussion question: How often should this group meet?

Federal departments will provide secretariat services to support meeting delivery and the preparation of summary meeting notes.

A forward agenda will be established collaboratively amongst advisory group participants, and will be approved by the chair/co-chair.

Discussion question: What do you feel should be a priority topic on future agenda's?

7. REPORTING

- The Chair will disseminate meeting outcomes and action items through the federal secretariat to this Advisory Group.
- Individual participants of this Advisory Group will also report back to their respective organizations.
- The Chair/secretariat will provide draft meeting notes and record of recommendations and follow up actions to all participants within two weeks of the meeting.
- The secretariat to the Advisory group will track how action items have been addressed and what work will be done to address concerns, recommendations or questions.

8. LINKAGES

The Advisory Group may be informed and advised by other various and already established SRKW working groups and committees, which are generally threat-based. A list of other currently active groups is provided at Annex B.

Discussion Question: Are there other relevant or related working groups or discussion forums that should be included in this table?

9. FUNDING

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The Federal Government has allocated an annual budget to support the Advisory Group.

Annex A: Participant List

Sector	Name	Position	Affiliation	E-mail
Indigenous representatives			UBC	
			First Nations Summit	
			FNFC	
			FNFC	
			FNFC	
NGOs			Raincoast Conservation Foundation	
			Georgia Strait Alliance	
			WWF Canada	
			David Suzuki Foundation	
			Natural Resources Defence Council	
			Vancouver Aquarium [Oceans Wise / CORI Team]	
Shipping Industry			Port of Vancouver	
			Shipping Federation of Canada	
			Chamber of Shipping	
			Canadian Ferry Association	
Fishing Industry			Sport Fishing Advisory Board	
			BC Seafood Alliance	
Whale Watching			Pacific Whale Watching Association	

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Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca
Municipal Government			City of Vancouver	
Federal government	Rebecca Reid	Regional Director General, Pacific Region	DFO	Rebecca.Reid@dfo-mpo.gc.ca
	Carmel Lowe	Regional Director, Science, Pacific Region Science	DFO	Carmel.Lowe@dfo-mpo.gc.ca
	Andy Thomson	Regional Director, Fisheries Management	DFO	Andrew.Thomson@dfo-mpo.gc.ca
	Sylvie Lapointe	ADM, Fisheries and Harbours Management	DFO	Sylvie.Lapointe@dfo-mpo.gc.ca
	Michelle Sanders	Director, Clean Water Policy	TC	Michelle.Sanders@tc.gc.ca
	Megan Nichols	Director General, Environmental Policy	TC	Megan.Nichols@tc.gc.ca
	Yvette Myers	Executive Director, Oceans Protection Plan	TC	Yvette.Myers@tc.gc.ca
	Marc D'Iorio	DG, Industrial Sectors, Chemicals, and Waste Directorate	ECCC	Marc.diorio@canada.ca
	Cecilia Wong	Senior Ecosystem Scientist	ECCC	cecilia.wong@canada.ca

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Annex B: Existing Working Groups/Committees			
Name of engagement activity	**Description**	**Purpose**	**Contact Person**
SRKW committee	Developed from need to have more engagement with First Nations and stakeholders around management measures for SRKW to reduce threat of prey availability and secondarily disturbance	ToR being drafted; but generally provide for engagement with First Nations and Stakeholders to discuss and get input on management actions for SRKW related to abating threat of reduced prey availability	
Canada-United States			
Toxics Working Group	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. Toxics working group formed as one of the three to support the Task Force.	Identify, research, and analyze potential actions for consideration.	
Vessels and Noise Working Group	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. The Working Group on Vessels and Noise reports to the Washington State Southern Resident Killer Whale Task Force	To develop recommendations on actions to reduce physical and acoustic disturbance impacting SRKW.	
Prey Working Group	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of	Identify range of actions to be considered to abate threat of reduced prey availability within Habitat, Harvest, Hydro, Hatcheries, Predations; prioritize, identify conflicts and synergies and deliver refined set of actions to Task Force to be considered in	

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	Southern Residents and necessary to secure a healthy and sustained population for the future. Prey working group formed as one of three to support the Task Force.	final report due Nov.1 2018	
Salish Sea Transboundary Ecosystem Indicators (TBI) Project	The TBI project is led by Environment and Climate Change Canada (ECCC) and the United States Environmental Protection Agency (US EPA) to characterize the state of ecosystem health in the Salish Sea (overlaps with SRKW critical habitat) and convene subject experts to identify threats and responses to concerning trends. Ten indicators are tracked including SRKW abundance, toxics in the food web and chinook abundance. A public facing website supports communication of project outcomes.	The TBI project is a commitment under the ECCC - US EPA Statement of Cooperation to share information and foster collaboration on priority issues in the Salish Sea ecosystem.	
DFO/ National Oceanic and Atmospheric Administration prey working group	Group that has organized workshops to review and understand the science on prey availability for SRKW and identify potential management action.		
SRKW and Underwater Vessel Noise			
Enhancing Habitat Cetacean Observation (ECHO) Advisory Working Group (AWG)	The ECHO AWG brings together a broad spectrum of interests from Canada and US to address threats to at-risk whales.	The role of the AWG is to provide the ECHO program management team with input, advice and recommendations during the development and execution of the program's projects and initiatives.	
Enhancing Habitat Cetacean Observation (ECHO) Vessel Operators Committee (VOC)	The ECHO VOC was established in December 2016 to provide the ECHO Program team with advice, support and guidance pertaining to potential mitigation options that may directly impact the shipping industry.	To bring key stakeholders together to develop mitigation options to reduce underwater vessel noise	
Ship Noise Mitigation Risk Assessment	The Ship Noise Mitigation Risk Assessment was commissioned by Transport Canada to assess and quantify the navigation safety risks associated with introducing or	The purpose of the stakeholder engagement sessions was to present the results of the TC commissioned risk assessment, and seek feedback	

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	implementing potential mitigation measures to address underwater noise in the Salish Sea.	from key industry stakeholders, First Nations and US Tribes in the Salish Sea region.	

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TECHNICAL BRIEFING AND ROUNDTABLE ON SOUTHERN RESIDENT KILLER WHALE RECOVERY

JUNE 22, 2018

VANCOUVER, BRITISH COLUMBIA

SUMMARY: WHAT WE HEARD

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Meeting Objectives

- Provide an overview of the management efforts undertaken over the last several years.
- Review new measures in today's announcements, under the Whales Initiative.
- Engage in a roundtable discussion on the way forward, including a proposal for an Indigenous and multi-stakeholder advisory committee.

Opening Remarks:

Deputy Ministers:

- Acknowledged the importance of the protection and recovery of the Southern Resident killer whale (SRKW), the significant efforts that have been undertaken to date, including the Science Based review of threats to SRKW and the Symposium to convene diverse interests toward SRKW recovery, and the new measures that have been announced under the Whales Initiative.
- Emphasized that measures will need to go beyond immediate actions being announced but as an ongoing process of continually strengthening measures as more information and science becomes available.
- Working together with First Nations and stakeholders, including NGOs and industry to maximize the effectiveness of recovery measures being implemented.

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Roundtable: Key Themes from invited participants

1. Establishing a Forum for Engagement

- Overall recognition that the Southern Resident Killer Whale (SRKW) population is facing imminent threats to its survival and recovery and that protection and recovery actions will benefit from collaboration between agencies and multiple interests including Indigenous, NGO and industry interests.

- Strong endorsement for a SRKW Indigenous and multi-stakeholder advisory committee.

- This committee could facilitate valuable engagement with many groups – amongst each other and with the relevant federal departments.

- Effective requirements of an Advisory Committee should include:
    - Terms of Reference;
    - Clear direction on who and how actions will be achieved;
    - Trust built and established in a short time with members open about own information and goals;
    - Decision-makers who can effect change to be present on a regular basis at meetings.

- Effective plans to support SRKW recovery should include:
    - Clear objectives and goals as they relate to the needs of the SRKW;
    - Targeted levels of reduction among threats to recovering viable populations of SRKW
    - Immediate actions on threats that are well understood.
    - Adaptive management and longer term research on threats that are less understood.

2. Management Approach

- The management approach for SRKW recovery and protection needs to consider:

Short term vs. Long-term Measures

- Identify and implement short term/immediate actions

- Adaptive management (i.e., measures continually improved through science and knowledge) supports good policy development

- Adaptive management is a process that takes time and cannot be relied upon to produce immediate actions or measures (i.e., the associated timeline is too long to address recovery for the SRKW population)

- The federal government needs to provide direction on how to implement a requirement/action not just continue to seek justification or additional evidence regarding the effectiveness of recovery measures.

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Voluntary vs. Regulatory Measures

- Consider effectiveness and appropriateness of voluntary and/or regulatory actions;

- Voluntary cooperation on recovery measures that are mutually agreed upon may be implemented immediately or in the near-term. With cooperative monitoring and data sharing on the effectiveness of measures, voluntary actions may lend well to adaptive management including course correction if appropriate.

- Regulations take time to develop however may be more broadly applied with compliance promotion and enforcement, and would provide greater certainly among interests about recovery measures. With broader implementation, there would be improved data to inform adaptive management decisions

Targets and Measurable Results

- To be successful, identified measures/activities to reduce threats to SRKW viability must have: a) alignment with objectives for recovering SRKW population, b) clear reduction targets that reflect interactions among threats, and c) performance measures to indicate the effectiveness of measures.

- To inform adaptive action, identification of research needs and provision of science advice needs to be timely. It is important to think about the measures in place and how to measure the effects of these protections.

3. Monitoring and Enforcement

- There is general concern for how monitoring and enforcement will be implemented and made effective for SRKW recovery and protection. Clarification of how the new regulations will be enforced is also needed.

- Whale detection in real time is an important tool.

4. Indigenous Rights and Access

- Fisheries management decisions and SRKW recovery measures can have impacts on First Nations' ways of life, including fisheries for food, social and ceremonial purposes, and this should be carefully considered and respected so that access and rights are preserved.

- Long term planning is important, but to get buy in and support, short term recovery measures are necessary. To build the relationships with First Nations these short term measures need to be appropriate and meaningful.

5. Federal and Provincial Collaboration

- Federal and Provincial governments need to work together to coordinate respective recovery actions especially as it pertains to habitat protection and restoration for Chinook

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and Coho Salmon (e.g., water quality for juvenile salmon in river and out to sea; effects of logging and fire management)

6. Threat Abatement for SRKW

Actions to abate the threat of reduced prey availability need to:

- Be broad and consider all components, including harvest (e.g., at sea and in tidal waters), hatchery production, and habitat (e.g., juvenile Chinook and Coho Salmon survival related to water quality and habitat from freshwater to sea, spawning success including clear access to spawning grounds – protection and restoration)

- Consider existing initiatives around salmon survival and conservation (e.g., Wild Salmon Policy, efforts under the Oceans Protection Plan) and identify where efforts may be aligned.

- Need to consider the Chinook Salmon take from Alaska and discuss reductions on Alaska's catch to achieve greater escapement in Canada and more Chinook Salmon for SRKW.

7. Other Threats

- Vessel strikes should be considered as one of the threats to SRKW.

- Further development, investment and application of whale detection in real time is needed to help abate threats to SRKW (e.g., vessel strikes, acoustic/physical disturbance); clear goals and timeline are needed.

Actions to abate the threat of contaminants

- Sources and sinks of contaminants will be an important focus going forward, particularly in urban areas to understand impacts to SRKW habitat, prey availability, and toxics in prey.

- Sampling in the Fraser and other rivers will be a method of determining if there are adverse impacts to habitat and prey from waste water and runoff to the system; examining leachate from land fill areas will help determine if this is a source of contamination.

- The Disposal at Sea regulations under Canadian Environmental Protection Act serve as protective controls that are currently in place but it will be important to look at these closely to see if there are areas for improvement e.g. monitoring sites more closely to establish more protective limits and to ensure contaminants such as PBDEs are not increasing.

- Under the Chemicals Management Plan, contaminants known or suspected to be affecting whales, such as flame retardants (e.g. PBDEs), existing controls will be evaluated and strengthened

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Key Messages, Next Steps & Actions Committed

Key Messages

- Overall strong support received from participants for the establishment of an Indigenous and multi-stakeholder advisory committee
- Ensure preservation of Indigenous economic benefits, Indigenous rights and cultural practices.
- The Advisory Group must have a clear, well defined role.
- Short and long term goals are needed, but short term action must be a priority for immediate threat abatement.
- Need to identify what additional short term actions are required and who needs to be involved in implementing them.
- Identify when and where voluntary and/or regulatory measures are most effective.
- Decision makers need to attend meetings; be willing to listen.
- Science needs must be identified to ensure research is appropriately addressing questions within timelines for SRKW recovery.
- Enforcement activity related to management measures and new regulations needs to be clarified and clearly communicated.

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Next Steps & Actions Committed

- Based on input from participants during the roundtable discussion, a draft Terms of Reference will be developed and shared for input prior to the next meeting.

- A follow-up meeting with all participants will take place in 4-6 weeks' time to discuss:
    - draft Terms of Reference;
    - group membership, roles and responsibilities;
    - meeting frequency;
    - Milestones and deliverables;
    - Recent developments / progress on SRKW measures;
    - need for technical sub-committees / working groups to inform/support the advisory committee
        - identify existing SRKW-related initiatives that may align and provide support to the committee
- A summary of what was heard at this meeting will be provided to all participants.

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Annex A: Questions and Responses

1. **What are the levels of threat reduction (in marine activities) needed to put SRKW recovery on a positive trajectory? E.g. what will be the target needed for increased prey availability?**

[redacted]

2. **How will the new requirements under the Marine Mammal Regulations be enforced?**
    - **E.g. how will enforcement differ between whales and pinnipeds? How will aerial surveillance be able to differentiate between a vessel approaching an SRKW or the other way around? Can different regulation apply for Transient Killer Whales to Resident Killer Whales in context of whale watching?**

Response:

[redacted]

3. **In aerial surveillance programs, how far out to sea will they go to capture illegal high seas fishing? What arrangements with other countries are in place for aerial surveillance?**

Response:

[redacted]

4. **Need a multipronged approach that explores impacts resulting from the Alaska fishery. Currently given that the US government is reluctant to reduce harvest, what is DFO doing to negotiate with them?**

    - [redacted]

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s.21(1)(a)

s.21(1)(b)

5. **How will issues of prey (Chinook and Chum) availability and health be addressed with province of BC? Is there an MOU currently in place?**

   - Karen to provide some bullets

6. **What money is being spent to increase Chinook Salmon abundance?**
   - Lisa to Email Ryan Galbraith (SEP)

7. **Regarding recreational finfish closures in Gulf Islands, are there any plans for direct observation to determine if the closure contributes to any change for SRKW success in the area?**

Lisa to add...

-
-

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Annex B: Participant List

Sector	Name	Position	Affiliation	E-mail	Present
Indigenous representatives			UBC		X
			First Nations Summit		X
			FNFC		X
			FNFC		X
			FNFC		X
NGOs			Raincoast Conservation Foundation		X
			Georgia Strait Alliance		X
			WWF Canada		X
			David Suzuki Foundation		X
			Natural Resources Defence Council		X
			Vancouver Aquarium [Oceans Wise / CORI Team]		X
			Oceanwise		X
Shipping Industry			Port of Vancouver		Did not attend
			Port of Vancouver		X
			Shipping Federation of Canada		X
			Chamber of		X

s.19(1)

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			Shipping		
			Canadian Ferry Association		X
			BC Ferries		X
			Sport Fishing Advisory Board		X
			BC Seafood Alliance		X
Whale Watching			Pacific Whale Watching Association		X
			Eagle Wing Tours (PWWA VP)		Phone
			Springtide whale watching and eco tours		Phone
			Vancouver Whale Watch		phone
Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca	X
Municipal Government	*No attendee*	-	City of Vancouver	-	?
Federal government	Rebecca Reid	Regional Director General, Pacific Region	DFO	Rebecca.Reid@dfo-mpo.gc.ca	X
Federal government	Carmel Lowe	Regional Director, Science, Pacific Region Science	DFO	Carmel.Lowe@dfo-mpo.gc.ca	X
Federal government	Andy Thomson	Regional Director, Fisheries Management	DFO	Andrew.Thomson@dfo-mpo.gc.ca	X
Federal	Kevin	Associate	DFO	Kevin.Stringer@dfo-mpo.gc.ca	X

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government	Stringer	Deputy Minister			
Federal government	Sylvie Lapointe	ADM, Fisheries and Harbours Management	DFO	Sylvie.Lapointe@dfo-mpo.gc.ca	X
Federal government	Michelle Sanders	Director, Clean Water Policy	TC	Michelle.Sanders@tc.gc.ca	X
Federal government	Megan Nichols	Director General, Environmental Policy	TC	Megan.Nichols@tc.gc.ca	X
Federal government	Michael Keenan	Deputy Minister	TC	Michael.Keenan@tc.gc.ca	X
Federal government	Yvette Myers	Executive Director, Oceans Protection Plan	TC	Yvette.Myers@tc.gc.ca	X
Federal government	Marc D'iorio	DG, Industrial Sectors, Chemicals, and Waste Directorate	ECCC	Marc.diorio@canada.ca	X
Federal Government	Cecilia Wong	Senior Ecosystem Scientist	ECCC	cecilia.wong@canada.ca	X
Federal Government	Mary-Ann Spicer	Manager, Chemicals Management Division	ECCC	mary-ann.spicer@canada.ca	Phone
Federal Government	Christopher Marshall		ECCC	christopher.marshall@canada.ca	Phone
Federal Government	Kendra Moore	Fisheries and Aquaculture Management	DFO	Kendra.moore@dfo-mpo.gc.ca	Phone
Federal Government	Robert Dick	Regional Director	TC	Robert.Dick@tc.gc.ca	X

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Mbarushimana, Jenny

From: Chiu, Scott
Sent: July-19-18 12:14 PM
To: Brekke, Heather; Busby, Corina
Cc: Leslie, Karen; Jones, Lisa Ann; Young, Jessica
Subject: RE: For action: RKW aRS BN and attachments to be entered into approval system

Thank you.

From: Brekke, Heather
Sent: July-19-18 3:13 PM
To: Chiu, Scott; Busby, Corina
Cc: Leslie, Karen; Jones, Lisa Ann; Young, Jessica
Subject: FW: For action: RKW aRS BN and attachments to be entered into approval system
Importance: High

Hi Scott,

Please see attached documents that are being processed for regional approvals. Please speak with Corina about potential changes to the document when you are back in the office to move this document forward.

Best
Heather

From: Brekke, Heather
Sent: July-19-18 11:57 AM
To: Ko, Christina
Cc: Leslie, Karen; Fershau, Jonathan; Jones, Lisa Ann
Subject: For action: RKW aRS BN and attachments to be entered into approval system
Importance: High

Hi Christina,

Please see attached briefing note and supporting documents to be submitted for regional approvals. Please process as soon as possible given tight turn around. Through this Briefing Note, we are now seeking regional approval for the Amended Recovery Strategy to be sent for Minister approval for posting as a Proposed Amended Recovery Strategy for a 60-day national public comment period on the SAR Public Registry. Note this approval process is expedited and we require **RDG approval by July 26, 2018**. All signatories have been made aware of this tight timeline. Karen will initial the cover sheet once you print off the docket.

Routing for this Briefing Note is as follows:

- Enter into GCCMS by EMB EA
- Simultaneous signatures of all in remarks section given expedited timeline (Neil Davis, Director, RM; Carmel Lowe, RD, Science; Andrew Thomson, RD, FM)
  **Note: Please check with their admins to ensure they are aware of this expedited nature, and notify Jonathan Fershau and myself once signatures have been received at each stage*
- Cheryl Webb, RD, EMB
- Rebecca Reid, RDG

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Attached to the Briefing Note "EXTERNAL REVIEW ON THE PROPOSED AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE" are two documents:

- Attachment 1: Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada [PROPOSED]
- Attachment 2: External Review of the Draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Oricinus orca) in Canada: Consultation Summary

*NOTE: The proposed Amended Recovery Strategy will be moving through the Parks Canada Agency approval process to Helen Davies at the same time.

Thank you,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

Pages 320 to / à 413
are duplicates of
sont des duplicatas des
pages 1549 to / à 1642

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Delaney, Paula

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: July-19-18 1:40 PM
To: Leslie, Karen; Brekke, Heather
Subject: referral of comments on Northern and Southern killer whales
Attachments: RE: Draft_Reply_2018-001-01293.docx

Hi. Ottawa will respond to writers telling them that the letter has been forwarded to Pac SARA for consideration. They will forward letters to you; you are then free to respond as/if you deem appropriate.

There will be exceptions, e.g. we have a letter from Premier Horgan that the Minister will sign. For that one, please send us your draft once it's finalized. I have attached the current draft of the response we were working on. It includes comments from Jeff Grout (who notes that it's not his area, but has some suggestions).

We are waiting for Ottawa to tell us if the 3 other responses we have will continue through the existing process or if they'll be referred to you.

Call me if you need clarification.
Candace

From: Mclarens, Scott
Sent: Thursday, July 19, 2018 12:40 PM
To: pac.prmc / pac.urpcm (DFO/MPO)
Cc: Jaremek, Daniel
Subject: RE: ** Reminder ** : MCU Request - referral of comments on Northern and Southern killer whales

Hey Candace, sorry for the delay.

We'll send a manager's response to the correspondent telling them their letter has been referred to PAC SARA.

MCU will then close the docket. If program deems a response to be the correct course of action they will be responsible for a direct response with correspondence unit involvement.

We are in the process of confirming for those three dockets and will get back to you as soon as we can.

Thanks very much,

Scott

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: July-19-18 3:02 PM
To: Mclarens, Scott
Cc: Jaremek, Daniel
Subject: ** Reminder ** : MCU Request - referral of comments on Northern and Southern killer whales

Hi Scott. Our SME is following up. Any response?
Candace

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From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: Tuesday, July 17, 2018 2:35 PM
To: Mclarens, Scott
Subject: FW: MCU Request - referral of comments on Northern and Southern killer whales

Hi Scott. Pac SARA just confirmed that all correspondence re killer whale critical habitat consultation can be referred directly to Pacific SARA (Heather Brekke).

To confirm, does that mean the program would be responsible for a direct response (without correspondence unit involvement)?

And please confirm that would apply to the 3 dockets currently assigned to Pacific (01293, 01303 and 01314)

Thanks
Candace

From: Mclarens, Scott
Sent: Monday, July 16, 2018 7:06 AM
To: pac.prmc / pac.urpcm (DFO/MPO)
Subject: FW: MCU Request - referall of comments on Northern and Southern killer whales

Hi Pacific,

Per below, could you please confirm that MCU can handle any correspondence on the "External review of the critical habitat section of the draft Amended Strategy for the Northern and Southern Killer Whales in Canada" through a manager referral to PAC SARA? Attached are the current incoming messages on the subject, any new incoming would be handled the same way.

Thank you,

Scott

From: Godby, Leah
Sent: July-16-18 10:03 AM
To: Mclarens, Scott
Cc: Jaremek, Daniel
Subject: FW: MCU Request - referall of comments on Northern and Southern killer whales

Hi Scott,

Michael has advised that a MCU manager referral makes sense. Can you please reach out to PAC SARA and see if they agree that we can just refer the correspondence to them? Alternatively, we can put it in as reply by department for them to answer.

Thanks,

Leah

From: Godby, Leah
Sent: July-16-18 9:35 AM
To: Valerio, Michael
Cc: Langton, Erin; Jaremek, Daniel
Subject: FW: MCU Request - referall of comments on Northern and Southern killer whales

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Hi Michael,

The department had an external review process for stakeholders to provide their comments on the amended recovery strategy for the Northern and Southern Resident Killer Whales.
Comments were to be sent to the Pacific region SARA group.

We received three letters on the subject addressed the Minister. I asked Scott to confirm with Julie Stewart where the comments should go and she confirmed they are to go to the PAC SARA. Can we just forward to them? Or do a MCU manager referral to program? The correspondents are:

- An association
- BC Chamber of Commerce
- Ucluelet's Mayor and Council

We could put them in for a reply but as PAC will not be responding to all the feedback they received, the response would most likely be, thank you for your letter.

I've attached the letters here and as well Julie Stewart's comments below.

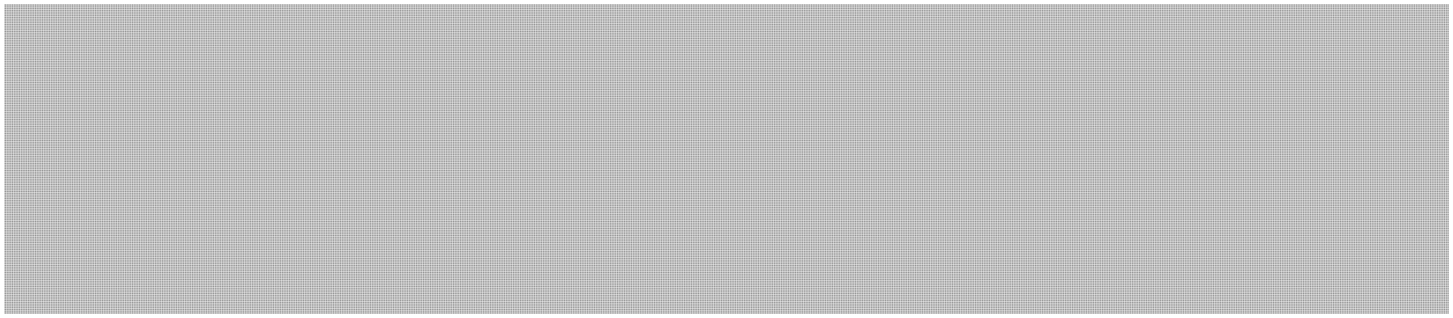
Leah

From: Mclarens, Scott
Sent: July-13-18 9:14 AM
To: Godby, Leah
Subject: FW: MCU Request - referall of comments on Northern and Southern killer whales

SAR advises we should send the incoming to PAC.

Scott

From: Stewart, Julie
Sent: July-12-18 6:39 PM
To: Mclarens, Scott; Kairouz, Amanda
Subject: RE: MCU Request - referall of comments on Northern and Southern killer whales



All incoming letters of this nature should be referred to Pacific Region as they are handling the consultations, and will have to reflect all positions received

Julie Stewart

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Director / Directrice
Species at Risk Program / Programme des Espèces en Péril
200 rue Kent St.
Station 10W061
Ottawa, ON
K1A 0E6

(613) 949-7524 (t)
[redacted](c)

Julie.stewart@dfo-mpo.gc.ca

From: Mclarens, Scott
Sent: Thursday, July 12, 2018 3:42 PM
To: Kairouz, Amanda <Amanda.Kairouz@dfo-mpo.gc.ca>
Cc: Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>
Subject: MCU Request - referall of comments on Northern and Southern killer whales

Hi Amanda,

Could you please advise whether MCU can refer to SAR comments received on the External review of the critical habitat section of the draft Amended Strategy for the Northern and Southern Killer Whales in Canada?

I have attached two examples of the incoming.

Thank you very much,

Scott McLarens

Writer/Editor, Ministerial Correspondence Unit
Fisheries and Oceans Canada / Government of Canada
scott.mclarens@dfo-mpo.gc.ca / Tel: 613-990-9950

Rédacteur/Réviseur, Unité de la correspondance ministérielle
Pêches et Océans Canada / Gouvernement du Canada
scott.mclarens@dfo-mpo.gc.ca / Tél. : 613-990-9950

XNCR-GrpCW/RC@dfo-mpo.gc.ca to contact all MCCU Writers / pour rejoindre tous les rédacteurs d'UCCM
XNCR-GrpCA/AC@dfo-mpo.gc.ca to contact all MCCU Analysts / pour rejoindre tous les analystes d'UCCM

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Delaney, Paula

From: Grout, Jeff
Sent: July-17-18 4:14 PM
To: pac.prmc / pac.urpcm (DFO/MPO)
Subject: RE: Draft_Reply_2018-001-01293.docx
Attachments: MECTS-#3934501-v3-Draft_Reply_2018-001-01293-JG.docx

Some comments in the attached. I am not really the lead on critical habitat but suggested some information that may be helpful for the reply. SARA staff will need to review. Jeff

---

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: 2018–July-16 12:30 PM
To: Grout, Jeff
Subject: Draft_Reply_2018-001-01293.docx
Importance: High

Hi Jeff.

We're looking for your approval on this draft response **by 12:30pm Tuesday, but sooner if at all possible.** Please note that we have drafted this reply in response to a number of letters re: timing of External Review consultation. See four incoming letters attached.

Please use track changes to insert any necessary edits in the attached document, and FORWARD the document to XPAC PRMCU.

Your review should also include technical accuracy and consistency with policy direction.

If you think someone else in Pacific Region or in Legal Services must approve and they aren't on our approval list, **please advise us ASAP and we will forward the documents for their approval**.

Thanks,

Alison

****Please direct all e-mails regarding ministerial correspondence to XPAC PRMCU.****

Candace McGuire, Heather Fowlie & Alison Jacques

Managers, Pacific Region Ministerial Correspondence Unit
Fisheries and Oceans Canada/Government of Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

Gestionnaires de la correspondance ministériel
Pêches et Océans Canada/Gouvernement du Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

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Ministerial Correspondence / Correspondance ministérielle Approval Form / Formulaire d'approbation

MCCU DOCKET # / N° DU DOSSIER UCCM : 2018-001-01293	MCCU CONTACT / RESPONSABLE À L'UCCM :
REPLY BY DEPARTMENT/ RÉPONSE DU MINISTÈRE	

DATE AND DEADLINES / DATE ET ÉCHÉANCE

DUE DATE TO MINO / ÉCHÉANCE AU CM : (mm-dd-yyyy / mm-jj-aaaa)	/2018	DATE RECEIVED IN MCCU / DATE DE RÉCEPTION À L'UCCM : (mm-dd-yyyy / mm-jj-aaaa)	/2018

COMMENTS / APPROACH – COMMENTAIRES / APPROCHE

APPROVALS / APPROBATIONS

Level / Niveau	Name, Title and Sector / Nom, titre et secteur	Assigned Date / Date fixée	Date Due / Échéance	Date Approved / Date d'approbation	Changes / Modifications
	Karen Leslie A/Manager, Species at Risk Program, Ecosystem Management Branch			July 13, 2018	Yes
	Jeff Grout Resource Manager, Salmon, Fisheries Management Branch				
	Neil Davis Director, Resource Mgmt. – Program Delivery, Fisheries Management Branch				
	Jennifer Nener Director, Salmon Management - Client Service				
Regional Director / Directeur(trice) régional(e)	Cheryl Webb Regional Director, Ecosystem Management				
Regional Director / Directeur(trice) régional(e)	Andrew Thomson Regional Director, Fisheries Management Branch				
	Approvals needed in Ottawa? Yes / No				
IF NECESSARY / SI NÉCESSAIRE					
Regional Director General / Directeur(trice) général régional(e)	Rebecca Reid, Regional Director General, Pacific Region				
ADM / RDG / DC / CO / AC SMA / DGR / SA / BC / CA					
Indigenous Affairs / Affaires autochtones Legal / Services juridiques IGA / AI					
IF / SI PROVINCIAL / TERRITORIAL					
DM / SM					
PCO / BCP					

OTHER CONSULTATIONS / AUTRES CONSULTATIONS

INFO COPIES TO / COPIES POUR INFORMATION À (Office, Branch, Date / Bureau, direction, date)	DEVELOPED WITH SME(S) OR OTHER STAKEHOLDER(S) / ÉLABORÉ AVEC EXPERT(S) EN LA MATIÈRE OU AUTRE(S) INTERVENANT(S)

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	(Name, Title, Branch, Date / Nom, titre, direction, date)
•	• Manager, Ministerial Correspondence, Pacific Region
OGD / AMG - (Name, Title, Branch, Date / Nom, titre, direction, date)	
•	

FOR MCCU USE / RÉSERVÉ À L'UCCM

b.c.c. / Cci – (Name, Department / Nom, ministère)	c.c. – (Name, email address / contact info / Nom, courriel, coordonnées)
•	•
ATTACHMENTS TO RESPONSE / PIÈCES JOINTES À LA RÉPONSE	
•	

Field Code Changed

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s.19(1)

s.21(1)(a)

s.21(1)(b)

[redacted]

Port Renfrew Chamber of Commerce

[redacted]

[redacted]

…/2

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s.21(1)(a)

s.21(1)(b)

[redacted]

Thank you for writing. I appreciate the opportunity to respond to your concerns.

Yours sincerely,

Andrew Thomson
Regional Director
Fisheries Management Branch
Pacific Region

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Cheryl Webb
Regional Director
Ecosystems Management
Pacific Region

bcc Heather Brekke

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Delaney, Paula

From: Malikian, Janine
Sent: July-19-18 8:43 AM
To: Brekke, Heather; Jones, Lisa Ann
Cc: Leslie, Karen
Subject: RE: Why was RKW RS first amended n 2011?

Yep, that works. We don't need to go into details.

Thanks Heather ☺

Janine

From: Brekke, Heather
Sent: July-19-18 8:39 AM
To: Malikian, Janine; Jones, Lisa Ann
Cc: Leslie, Karen
Subject: RE: Why was RKW RS first amended n 2011?

Hi Janine,

How about: "In 2011, minor amendments were made to clarify the attributes of the CH section."

Off the top of my head: this followed a court decision on the protection of RKW critical habitat, which led to the requirement of looking at habitat features, functions, and attributes. Let me know if you require more information – particularly on the 'why' as I would have to confirm details.

Best,
Heather

From: Malikian, Janine
Sent: July-19-18 8:36 AM
To: Brekke, Heather; Jones, Lisa Ann
Cc: Leslie, Karen
Subject: Why was RKW RS first amended n 2011?
Importance: High

Hi,

Looking for a line on this as requested by NHQ – part of the Q&A in approvals:

- The Recovery Strategy for Northern and Southern Resident Killer Whales was finalized in 2008 and first amended in 2011 – why?

Thanks,

Janine

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Wong, Eva

From: PAC-SARA / LEP-PAC (DFO/MPO)
Sent: July-19-18 3:42 PM
To: Shaikh, Sharlene; Jones, Lisa Ann
Cc: Brekke, Heather
Subject: FW: External review consultations: critical habitat section of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada

Hi all,

All "survey" respondents (522 in total) have now received a copy of the generic email. There were initially 5 bouncebacks, which I have reduced down to 2 undeliverable messages by correcting typos in the email addresses.

Below is an email we just received in response to our response...which does not warrant a further response.

jf

From: [redacted]
Sent: July-19-18 3:06 PM
To: PAC-SARA / LEP-PAC (DFO/MPO)
Subject: RE: External review consultations: critical habitat section of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada

Thank you for your response.

I would like to comment on this:

" Given the feedback received, we would like to clarify that, while existing Resident Killer Whale critical habitat does spatially overlap with the fishery management measures the Department recently put in place in key Southern Resident Killer Whale foraging areas, the current fishing measures do not directly relate to new or existing critical habitat designation. Additionally please note that critical habitat designation does not lead to the automatic prohibition of human activities occurring within its boundaries."

Yes it does. Do not feed me this. It is insulting to my intelligence.

Cheers,

[redacted]

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The Kerrisdale Lumber Company
6191 West Boulevard
Vancouver, BC
V6M 3X3

T
F 604 261 7842
C
E
www.kerrisdalelumber.com

From: PAC-SARA / LEP-PAC (DFO/MPO) <SARA.XPAC@dfo-mpo.gc.ca>
Sent: Thursday, July 19, 2018 2:42 PM
To: PAC-SARA / LEP-PAC (DFO/MPO) <SARA.XPAC@dfo-mpo.gc.ca>
Subject: External review consultations: critical habitat section of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada

Dear Sir/ Madam,

Thank you for participating in the 30-day online external review on the draft *Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada* held from June 12 – July 11, 2018. Your feedback will be considered and any necessary changes will be incorporated into the document accordingly.

Given the feedback received, we would like to clarify that, while existing Resident Killer Whale critical habitat does spatially overlap with the fishery management measures the Department recently put in place in key Southern Resident Killer Whale foraging areas, the current fishing measures do not directly relate to new or existing critical habitat designation. Additionally please note that critical habitat designation does not lead to the automatic prohibition of human activities occurring within its boundaries.

Please note that further input on the draft amended recovery strategy can be provided as part of a 60-day national public comment period, anticipated to begin in August 2018. We will notify you once this process begins.

Kind regards,

Pacific Region Species at Risk Program
Fisheries and Oceans Canada
200-401 Burrard Street
Vancouver, BC V6C 3S4

604-666-7907
SARA.XPAC@dfo-mpo.gc.ca

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Dozie, Juachi

From: Brekke, Heather
Sent: July-19-18 11:59 AM
To: Leslie, Karen; Fershau, Jonathan
Cc: Jones, Lisa Ann; Shaikh, Sharlene
Subject: Re: RKW aRS BN and attachments to be entered into approval system

Importance: High

Hi Both

Just a note, we made minor changes to the consultation summary document. It is now 2 pages and captures the key summaries from the review. The recovery strategy is now in a final proposed version and includes the update for BC. The BN also includes a final update including the letter from John Horgan.

Please let me know if you have any questions or require immediate change to any of the three documents.

Thanks all for getting this in! Woohoo!

Cheers
Heather

From: Brekke, Heather
Sent: July-19-18 11:57 AM
To: Ko, Christina
Cc: Leslie, Karen; Fershau, Jonathan; Jones, Lisa Ann
Subject: For action: RKW aRS BN and attachments to be entered into approval system
Importance: High

Hi Christina,

Please see attached briefing note and supporting documents to be submitted for regional approvals. Please process as soon as possible given tight turn around. Through this Briefing Note, we are now seeking regional approval for the Amended Recovery Strategy to be sent for Minister approval for posting as a Proposed Amended Recovery Strategy for a 60-day national public comment period on the SAR Public Registry. Note this approval process is expedited and we require **RDG approval by July 26, 2018**. All signatories have been made aware of this tight timeline. Karen will initial the cover sheet once you print off the docket.

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- Cheryl Webb, RD, EMB
- Rebecca Reid, RDG

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*NOTE: The proposed Amended Recovery Strategy will be moving through the Parks Canada Agency approval process to Helen Davies at the same time.

Thank you,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

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Wong, Eva

From: Leslie, Karen
Sent: July-19-18 8:17 AM
To: Brekke, Heather
Cc: Fershau, Jonathan
Subject: FW: BC Response to Section 7 (Critical Habitat) of the Amended RS for SRKW and NRKW
Attachments: RKW_SARCC_comments_compiled_17JUL18.docx

Here is BC's formal response

Karen Leslie
604-666-0395

From: Welsh, Leah ENV:EX [mailto:Leah.Welsh@gov.bc.ca] **On Behalf Of** Dale, Alec R ENV:EX
Sent: 2018–July-19 8:01 AM
To: PAC-SARA / LEP-PAC (DFO/MPO); Webb, Cheryl
Cc: Dolhaine, Daphne ENV:EX; Dale, Alec R ENV:EX; Leslie, Karen; Rasmussen, Paul FLNR:EX; Helen Davies
Subject: BC Response to Section 7 (Critical Habitat) of the Amended RS for SRKW and NRKW

Dear Ms. Webb,

Thank you for the opportunity to review Section 7 of the ***Amended Recovery Strategy for Northern and Southern Resident Killer Whales [Draft]***. Potentially affected ministries within the BC government had an opportunity to review and comment on the amended recovery strategy.

Specific comments have been attached in regards to Section 7 of the amended Recovery Strategy and does include some general comments on the Recovery Strategy as a whole.

I would like to start by recognizing the effort that DFO has made to consult with the province of British Columbia (BC) throughout the development of this draft amended recovery strategy. We have reviewed Section 7, as per the External Review Request, June 12, 2018, and have provided comments (attached) for consideration. The Province would appreciate a response as to how these comments have been considered/addressed in the Amended Recovery Strategy.

The province of British Columbia supports a transparent, science-based process for the identification of habitat required for a species' survival or recovery, where habitat protection decisions are informed by science and the evaluation of socio-economic considerations, full consultation with all directly affected parties has been completed, and all significant concerns have been addressed.

The Ministry of Environment and Climate Change Strategy, on behalf of the BC Government, accepts the proposed Section 7 of the amended Recovery Strategy including Critical Habitat identification as **Science Advice**, but we **do not support implementation of legal habitat protection measures** without evaluation of socio-economic implications and **full consultation with directly affected parties**.

To assist with provincial decision-making around subsequent protection, the province of BC encourages DFO to ensure that the relevant spatial and management information relating to proposed critical habitat is made readily available to statutory decision makers, for example through FrontCounter BC.

Side note – the request for this review came through a variety of avenues to the Province. Please ensure any review requests for the Province are directed to the Recovery Planning Coordinator (Karen.Stefanyk@gov.bc.ca), to ensure

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comprehensive, consolidated and timely review by all potentially affected ministries. The Province of British Columbia has a strong working relationship with our federal colleagues and have used and communicated this process with other departments of DFO.

Regards,

Alec Dale
Executive Director, Ecosystems Branch
Ministry of Environment and Climate Change Strategy
Mailing: PO Box 9338 Stn. Prov. Govt. Victoria, BC V8W 9M1
Courier: 4th Floor, 525 Superior St, Victoria BC V8V 1T7
Tel: 778-698-4384
Fax: 250-387-9750
Email: alec.dale@gov.bc.ca

From: PAC-SARA / LEP-PAC (DFO/MPO) [mailto:SARA.XPAC@dfo-mpo.gc.ca]
Sent: Tuesday, June 12, 2018 3:15 PM
Subject: External review consultations: critical habitat section of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada

Dear SARCC Members,
Please find attached information regarding the Fisheries and Oceans Canada / Parks Canada Agency external review of the critical habitat section (section 7) of the Species at Risk Act draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada.
Please distribute this notice and attachments to any other individuals or organizations you believe may be interested in this review.

If you have received this message in error please notify us, and we will ensure your contact information is removed from our distribution list.
Thank you,
Species at Risk Program
Pacific Region
Fisheries and Oceans Canada
200-401 Burrard Street, Vancouver BC V6C 3S4
Telephone: 604-666-7907
Facsimile: 604-666-0417

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Dozie, Juachi

From: Brekke, Heather
Sent: July-19-18 12:13 PM
To: Chiu, Scott; Busby, Corina
Cc: Leslie, Karen; Jones, Lisa Ann; Young, Jessica
Subject: FW: For action: RKW aRS BN and attachments to be entered into approval system
Attachments: MECTS-#XXXXXX-Proposed_RKW_aRS_Final.DOCX; 2018 Proposed Amended RS for Resident Killer Whales_final.docx; D1 - Consultation Summary aRS and CH (2018)_Final.docx

Importance: High

Hi Scott,

Please see attached documents that are being processed for regional approvals. Please speak with Corina about potential changes to the document when you are back in the office to move this document forward.

Best
Heather

From: Brekke, Heather
Sent: July-19-18 11:57 AM
To: Ko, Christina
Cc: Leslie, Karen; Fershau, Jonathan; Jones, Lisa Ann
Subject: For action: RKW aRS BN and attachments to be entered into approval system
Importance: High

Hi Christina,

Please see attached briefing note and supporting documents to be submitted for regional approvals. Please process as soon as possible given tight turn around. Through this Briefing Note, we are now seeking regional approval for the Amended Recovery Strategy to be sent for Minister approval for posting as a Proposed Amended Recovery Strategy for a 60-day national public comment period on the SAR Public Registry. Note this approval process is expedited and we require **RDG approval by July 26, 2018**. All signatories have been made aware of this tight timeline. Karen will initial the cover sheet once you print off the docket.

Routing for this Briefing Note is as follows:

- Enter into GCCMS by EMB EA
- Simultaneous signatures of all in remarks section given expedited timeline (Neil Davis, Director, RM; Carmel Lowe, RD, Science; Andrew Thomson, RD, FM)
  **Note: Please check with their admins to ensure they are aware of this expedited nature, and notify Jonathan Fershau and myself once signatures have been received at each stage*
- Cheryl Webb, RD, EMB
- Rebecca Reid, RDG

Attached to the Briefing Note "EXTERNAL REVIEW ON THE PROPOSED AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE" are two documents:

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- Attachment 1: Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada [PROPOSED]
- Attachment 2: External Review of the Draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Oricinus orca) in Canada: Consultation Summary

*NOTE: The proposed Amended Recovery Strategy will be moving through the Parks Canada Agency approval process to Helen Davies at the same time.

Thank you,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

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Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region | Région du Pacifique

Regional Director General | Directrice générale régionale

UNCLASSIFIED
2018-XXX-XXXXX
EKME # XXXXXXX

MEMORANDUM FOR THE REGIONAL DIRECTOR GENERAL, PACIFIC

REGIONAL APPROVAL OF THE PROPOSED AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE
(FOR DECISION)

SUMMARY OF ADVICE TO THE REGIONAL DIRECTOR GENERAL

[redacted]

.../2

Canada

s.21(1)(a)

s.21(1)(b)

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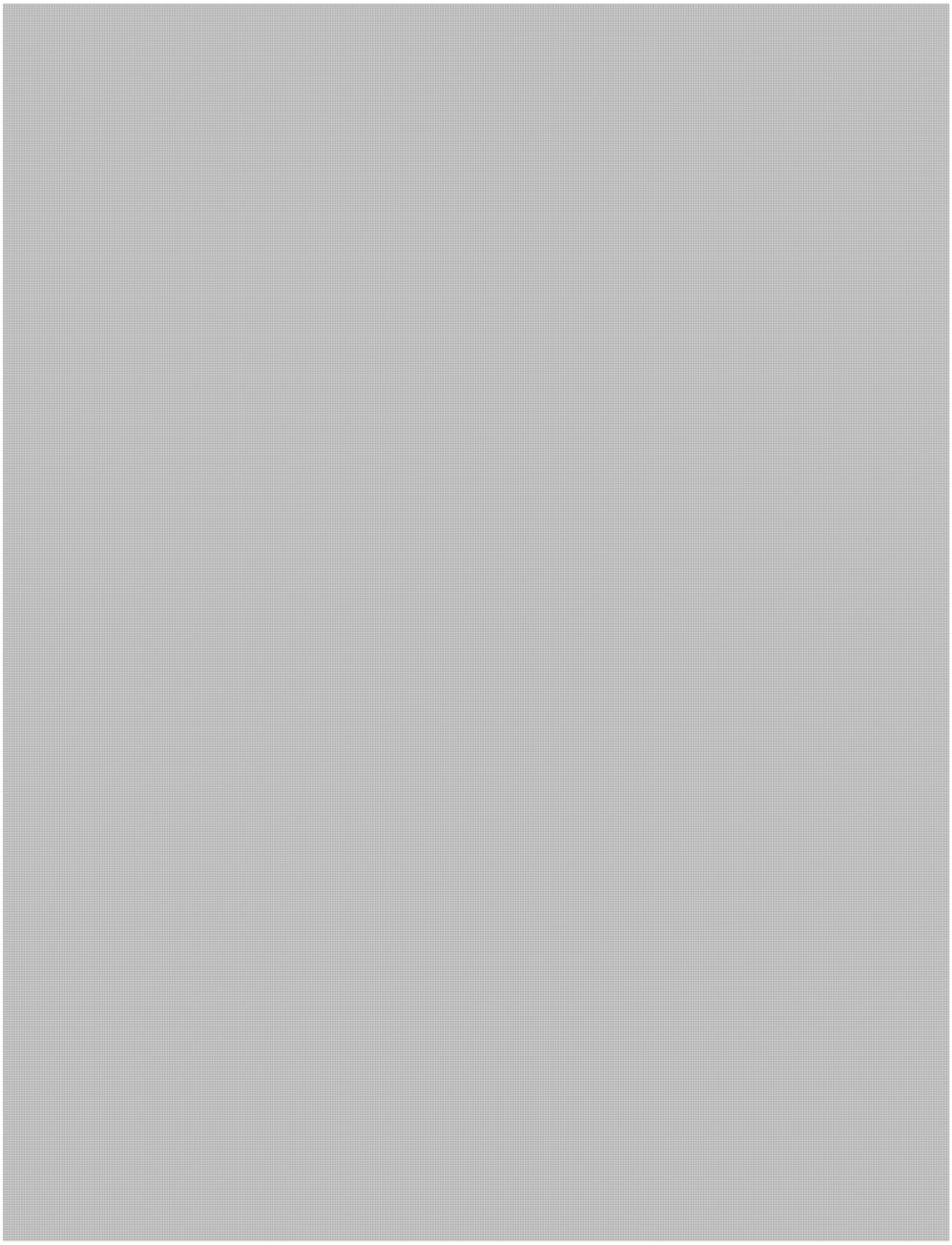

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[redacted]

s.21(1)(a)
s.21(1)(b)
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[redacted]

Cheryl Webb
Regional Director
Ecosystems Management Branch

☐ I concur with the recommendations

☐ I do not concur with the recommendations

Rebecca Reid
Regional Director General
Pacific Region

Attachment(s): (2)

1) Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada [PROPOSED]
2) Consultation Summary: External Review of the Draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada*

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Fisheries and Oceans Canada
Correspondence Routing Slip

Fiche d'acheminement de correspondance
Pêches et Océans Canada

UNCLASSIFIED
GCCMS # : 2018-505-00045
EKME # : 3920518

To:
Pour: Rebecca Reid

Date:

Object:
Objet: **REGIONAL APPROVAL OF THE PROPOSED AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE**

From / De: Cheryl Webb, Regional Director, Ecosystems Management Branch

Additional Approvals:
Autre(s) approbation(s):

☐	Material for the Minister Documents pour le Ministre	X	Your Signature Votre signature	☐	Information

Screen:
Filtre:

The Department has assessed this issue in full.

- ☒ It contains no reference to matters covered by the screen relating to J.D. Irving Limited.
- ☐ It contains matters referenced in the screen relating to J.D. Irving Limited, but in our view does not engage the screen.
- ☐ In our view, the screen relating to J.D. Irving Limited should be engaged.

Remarks:
Remarques:

This briefing note was developed in consultation with the following regions/sectors:

Neil Davis, Director, Resource Management

Carmel Lowe, Regional Director, Science

Andrew Thomson, Regional Director, Fisheries Management

Distribution:

Drafting Officer/ Rédacteur: LISA JONES (604-666-2792) / H. Brekke / K. Leslie / ck

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Consultation Summary: External Review of the Draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada*

External Review Period: June 12 to July 11, 2018

Overview

Fisheries and Oceans Canada (DFO) and the Parks Canada Agency (PCA) conducted a 30-day regional external review on section 7 (critical habitat) of the draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada* from June 12 to July 11, 2018. Input was sought from all potentially affected groups and individuals; including Wildlife Management Boards, Indigenous groups, other government agencies, and stakeholders.

The consultation process was conducted via an online response form hosted on DFO Pacific's consultation page. Respondents were requested to provide input on three questions:

1. Do you have any additional information relevant to the identification of critical habitat for Northern and Southern Resident Killer Whales, including features, functions and attributes?
2. Do you anticipate being directly affected by the identification and subsequent protection of the additional critical habitat and/or clarification of features, functions and attributes of critical habitat for Northern and Southern Resident Killer Whales?
3. Do you have any additional feedback regarding section 7 of the draft Amended Recovery Strategy for Northern and Southern Resident Killer Whales?

Additional information could also be provided via the Species at Risk Program's inbox (sara.xpac@dfo-mpo.gc.ca). Where requested, teleconference meetings were held with Indigenous groups, local and regional government representatives, and stakeholders for clarification of the process and implications of critical habitat (CH) identification and protection.

Online responses

A total of 670 online responses were submitted during the external review process. Responses were received from: recreational fishers (373), guide businesses (70), Chambers of Commerce and local government (51). The other 176 responses were received anonymously.

An analysis of the responses to each question posed on the consultation page is not provided as the majority of responses were broad in nature and did not directly answer the three questions. Instead, the key themes of the feedback provided are included below.

The majority of feedback received was concerned with:

- perceived implications of proposed CH designation to livelihoods, cultural values, and recreational opportunities in the vicinity of the proposed CH areas;
- insufficient consultation and timelines for the external review of the draft Amended Recovery Strategy;
- validity of the published scientific data on which the proposed CH was based, particularly in identifying La Pérouse Bank within Southwest Vancouver Island as an important area to killer whales; and,
- questions on whether other measures would be more effective than fishery closures to reduce impacts to killer whales e.g. mobile "bubble strategy".

Most respondents did not support the proposed CH amendment due to concerns raised around the perceived community impacts from the identification and protection of CH. It appears that respondents were considering CH protection as analogous to fishery closures. The 2018 salmon fishing closures spatially overlap with the proposed CH and concerns raised during the external review process are, in

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part, likely attributable to the confusion regarding what CH designation is, and concern that this will result in closures immediately or in the future (and subsequent perceived adverse impacts to their livelihoods). To provide further clarification, DFO provided a response explaining the differences between proposed CH and fishery closures in general as well as the differences between the proposed CH and the 2018 salmon fishing closures. This clarification was posted on the consultation website, social media (Twitter), and delivered via email to all online respondents.

Letters in Response to the draft Amended Recovery Strategy

Outside of the online responses, an additional 22 letters were received from the Premier of British Columbia, a Wildlife Management Board, Indigenous groups, local/ regional/ provincial government, stakeholders, and private citizens (Table 1).

The proposed CH was opposed by the Maa-nulth Treaty Society (representing Huu-ay-aht First Nations, Ka:'yu:k't'h'/Che:k'tles7et'h' First Nations, Toquaht Nation, Uchucklesaht Tribe, and Yuułu?ił?ath), 'Namgis First Nation, Pacheedaht First Nation, and the Ditidaht First Nation.

Representatives from local and regional governments as well as organizations representing recreational fishers and guides were mostly opposed to the CH designation based on similar concerns raised during the online consultation process. The Premier of British Columbia, John Horgan, also expressed concern with the timing of the external review period landing during a fishing period, perceived lack of meaningful consultation and concern over perceived adverse impacts to livelihoods. The Province of BC was supportive of the identification of CH but expressed a requirement to include a socio-economic analysis for protection of CH and also requested ongoing engagement and opportunities to provide feedback on initiatives related to Southern Resident Killer Whales. Provincial agencies provided specific comments on section 7 (critical habitat) while commending the federal government for their efforts to address the destruction of CH for RKW. Ecojustice expressed concern over the timeline (i.e. the process being too lengthy) and the approach used to identify CH. Vancouver Fraser Port Authority and the Chamber of Shipping both expressed support for the proposed CH but requested clarification of thresholds and values.

Table 1: Summary of written responses

User group	Support	Opposed	Info Request
Wildlife Management Boards		1 (5 signatories)	
First Nations	1	3	2
Local/regional governments; Chambers of Commerce		4	
Shipping industry	2		
Recreational fishers/ guide organizations		5	
Environmental non-governmental organizations	1 (6 signatories)		
Individual responses		3	
Total	22		

Revisions to the draft Amended Recovery Strategy

All feedback from this regional external review was considered but no substantive changes were made to the document. One minor change to the draft Amended Recovery Strategy was incorporated to better describe the attribute associated with the feature "Acoustic environment", as shown in Table 4 (page 63, proposed Amended Recovery Strategy).

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Proposed

Species at Risk Act
Recovery Strategy Series

Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada

Killer Whale

Original publication 2008
1st amendment 2011
2nd amendment 2018

Fisheries and Oceans Canada
Pêches et Océans Canada
Canada

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Recommended citation:

Fisheries and Oceans Canada. 2018. Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada [Proposed]. Species at Risk Act Recovery Strategy Series, Fisheries & Oceans Canada, Ottawa, x + 94 pp.

For copies of the recovery strategy, or for additional information on species at risk, including Committee on the Status of Endangered Wildlife in Canada (COSEWIC) Status Reports, residence descriptions, action plans, and other related recovery documents, please visit the SAR Public Registry.

Cover illustration: Graeme Ellis, Fisheries & Oceans Canada

Également disponible en français sous le titre :
« Programme de rétablissement modifié des épaulards résidents (*Orcinus orca*) du nord et du sud au Canada»

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Preface

The federal, provincial, and territorial government signatories under the Accord for the Protection of Species at Risk (1996) agreed to establish complementary legislation and programs that provide for effective protection of species at risk throughout Canada. Under the Species at Risk Act (S.C. 2002, c.29) (SARA), the federal competent ministers are responsible for the preparation of a recovery strategy for species listed as extirpated, endangered, or threatened and are required to report on progress five years after the publication of the final document on the Species at Risk Public Registry.

The Minister of Fisheries and Oceans and the Minister responsible for the Parks Canada Agency are the competent ministers under SARA for the Northern and Southern Resident Killer Whale and have prepared this strategy, as per section 37 of SARA. In preparing this recovery strategy, the competent ministers have considered, as per section 38 of SARA, the commitment of the Government of Canada to conserving biological diversity and to the principle that, if there are threats of serious or irreversible damage to the listed species, cost-effective measures to prevent the reduction or loss of the species should not be postponed for a lack of full scientific certainty. To the extent possible, the recovery strategy has been prepared in cooperation with Environment and Climate Change Canada and the Province of British Columbia, as per section 39(1) of SARA. In addition, both populations are considered trans-boundary in United States waters. The U.S. National Oceanic and Atmospheric Administration also participated in its preparation.

As stated in the preamble to SARA, success in the recovery of this species depends on the commitment and cooperation of many different constituencies that will be involved in implementing the directions set out in this strategy and will not be achieved by Fisheries and Oceans Canada, the Parks Canada Agency, or any other jurisdiction alone. The cost of conserving species at risk is shared amongst different constituencies. All Canadians are invited to join in supporting and implementing this strategy for the benefit of the Northern and Southern Resident Killer Whale and Canadian society as a whole.

In addition to this recovery strategy, an action plan for the Northern and Southern Resident Killer Whales has been developed that provides information on recovery measures underway and to be taken by Fisheries and Oceans Canada, the Parks Canada Agency and other jurisdictions and organizations involved in the conservation of the species. Implementation of this strategy is subject to appropriations, priorities, and budgetary constraints of the participating jurisdictions and organizations. Multi-species action plans have also been developed by the Parks Canada Agency that include recovery measures for Northern and Southern Resident Killer Whales.

Acknowledgements

Fisheries and Oceans Canada wishes to thank the Resident Killer Whale Recovery Team (Appendix B) for its efforts in developing the 2008 recovery strategy for the Northern and Southern Resident Killer Whales in Canada. The Team members were generous in contributing their own time to the development of the proposed recovery strategy. The recovery strategy is based on an extensive literature review and on technical input from individual team members

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and from group discussions and was mostly written by Kathy Heise. The Recovery Team is grateful for the expert reviews provided by Dr. Volker Deecke of the University of British Columbia and Dr. Christophe Guinet, Centre d'Etudes Biologiques de Chize, France. The cover photo was provided by Graeme Ellis. Doug Sandilands (Vancouver Aquarium Marine Science Centre) provided Figure 1. The amendments in the 2011 recovery strategy were prepared by Fisheries and Oceans Canada. The 2018 amendment to the recovery strategy was prepared by Christie McMillan with input from Dr. John Ford, Dr. Sheila Thornton, Dr. Thomas Doniol-Valcroze, Dr. Lisa Jones, Heather Brekke, Karen Leslie, and Dr. Lance Barrett-Lennard. Robin Abernethy prepared Figures 4 and 5.

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Strategic environmental assessment statement

A strategic environmental assessment (SEA) is conducted on all SARA recovery planning documents, in accordance with the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals. The purpose of a SEA is to incorporate environmental considerations into the development of public policies, plans, and program proposals to support environmentally-sound decision making.

Recovery planning is intended to benefit species at risk and biodiversity in general. However, it is recognized that strategies may also inadvertently lead to environmental effects beyond the intended benefits. The planning process based on national guidelines directly incorporates consideration of all environmental effects, with a particular focus on possible impacts on non-target species or habitats. The results of the SEA are incorporated directly in the strategy itself, but are also summarized below.

While this recovery strategy will clearly benefit the environment by promoting the recovery of the Northern and Southern Resident Killer Whales, several potentially adverse effects also were considered. Through the development of this strategy numerous anthropogenic factors that jeopardize or have potential to jeopardize the recovery of these populations were evaluated and are presented. Principal among the anthropogenic factors or threats are environmental contamination, reductions in the availability or quality of prey, and both physical and acoustic disturbance. In some cases these factors threaten the populations; in other cases they may affect critical habitat. It was concluded that some threats can be mitigated through the use of existing legislation, policies, and programs and, in fact, there are numerous examples of mitigation measures that are currently employed outlined herein. However, in other cases the threat and/or the potential mitigation measure(s) require further research or evaluation before recommendations on specific actions or activities can be formulated. The general type of research, evaluation, and approaches for mitigation are presented in this strategy. However, through the course of action planning, specific activities for recovery and mitigation have been evaluated and detailed in the action plan for these populations along with an evaluation of effects and costs of these activities and measures. Therefore, taking into account the general nature of the recommendations for mitigation to recover these populations and that many of the recommendations to protect critical habitat fall under existing legislation and policies, this strategy will not entail any new significant adverse effects.

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Executive summary

Two distinct populations of Resident Killer Whales (*Orcinus orca*), known as the Northern and Southern Residents, occupy the waters off the west coast of Canada. In 2001, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) designated Southern Resident Killer Whales as Endangered and Northern Resident Killer Whales as Threatened. Both populations are listed in Schedule 1 of the Species at Risk Act (SARA). These two populations are acoustically, genetically, and culturally distinct.

The "Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada" was finalized and published on the Species at Risk Public Registry in 2008. Minor amendments to the recovery strategy were made in 2011 to provide additional clarification regarding critical habitat for Northern and Southern Resident Killer Whales. This recovery strategy is herewith amended once again to include identification of additional critical habitat for these populations and to provide minor updates to background and species information. Additionally, sections of the recovery strategy have been reordered to align with current templates. This recovery strategy is considered one in a series of documents for this species that are linked and should be taken into consideration together; including the COSEWIC status report (COSEWIC 2008) and the Action Plan for the Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada (DFO 2017a). Recovery has been determined to be biologically and technically feasible.

Resident Killer Whale populations in Canadian Pacific waters are presently considered to be at risk because of their small population size, low reproductive rate, and the existence of a variety of anthropogenic threats that have the potential to prevent recovery or to cause further declines. Principal among these anthropogenic threats are environmental contamination, reductions in the availability or quality of prey, and both physical and acoustic disturbance. Even under the most optimistic scenario (human activities do not increase mortality or decrease reproduction), the species' low intrinsic growth rate means that the time frame for recovery will be more than one generation (25 years).

The Southern Resident Killer Whale population has fluctuated between 70 and 99 individuals since 1976, and consisted of 76 members in 2017 (Center for Whale Research unpublished data). During the summer and fall, Southern Residents are primarily found in the trans-boundary waters of Haro Strait, Boundary Pass, the eastern portion of Juan de Fuca Strait, and southern portions of the Strait of Georgia. Some members of the population typically remain in the same general area in winter and spring, but others range over much greater distances, and have been reported as far south as central California, and as far north as southeastern Alaska. During the summer and fall, the principal prey of Southern Residents is Chinook and Chum Salmon (*Oncorhynchus tshawytscha* and *O. keta*); less is known of their diet in the winter and spring.

The Northern Resident Killer Whale population experienced a decline of 7% between 1997 and 2002, but since that time has been increasing at a mean rate of 2.9% per year, reaching approximately 309 individuals in 2017 (Towers et al. 2015; Fisheries and Oceans Canada Cetacean Research Program (DFO-CRP) unpublished data). The population appears to spend the majority of its time from Campbell River and Alberni Inlet northwest to Dixon Entrance, but has been sighted as far south as Grays Harbor, Washington, and as far north as Glacier Bay, Alaska (Ford et al. 2000; 2017). Northern Residents also feed primarily on Chinook and Chum Salmon during the summer and fall. However, like Southern Residents, less is known of their

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winter distribution and diet, and this knowledge gap must be addressed to fully understand the principal threats affecting the population.

The goal of the Resident Killer Whale recovery strategy is to: "ensure the long-term viability of Resident Killer Whale populations by achieving and maintaining demographic conditions that preserve their reproductive potential, genetic variation, and cultural continuity[1]".

In order to achieve this goal, four principal objectives have been identified. They are:

Objective 1: ensure that Resident Killer Whales have an adequate and accessible food supply to allow recovery

Objective 2: ensure that chemical and biological pollutants do not prevent the recovery of Resident Killer Whale populations

Objective 3: ensure that disturbance from human activities does not prevent the recovery of Resident Killer Whales

Objective 4: protect critical habitat for Resident Killer Whales and identify additional areas for critical habitat designation and protection

A description of the broad strategies to be taken to address threats to the species' survival and recovery, as well as research and management approaches needed to meet the recovery goal and objectives are included in section 6. These strategies helped to inform the development of specific recovery measures in the action plan for Northern and Southern Resident Killer Whales. However, significant gaps in knowledge about Killer Whales remain and numerous actions have been identified to address these knowledge gaps and to identify further directions for recovery.

For Northern and Southern Resident Killer Whales, critical habitat is identified to the extent possible using the best available information, and provides the functions, features, and attributes necessary to support the species' life-cycle processes and contribute to achieving the species' recovery goal and objectives. This recovery strategy identifies critical habitat for Resident Killer Whales as four geographical areas: 1) the waters of Johnstone Strait and southeastern Queen Charlotte Strait (Northern Resident Killer Whale critical habitat); 2) transboundary waters in southern British Columbia, including southern Georgia Strait, Haro Strait, and Juan de Fuca Strait (Southern Resident Killer Whale critical habitat); 3) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (Northern and Southern Resident Killer Whale critical habitat); and 4) waters of west Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit (Northern Resident Killer Whale critical habitat) (section 7).

The Action Plan for the Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada was finalized and posted on the Species at Risk Public Registry in 2017. Additionally, multi-species action plans developed by the Parks Canada Agency include recovery measures for Northern and Southern Resident Killer Whales.

[1] Culture refers to a body of information and behavioural traits that are transmitted within and between generations by social learning

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Recovery feasibility summary

Resident Killer Whale populations are not expected to achieve high abundances that might result in a de-listing due to their ecological position as upper trophic-level predators coupled with their apparent propensity to live in relatively small populations. Despite this, and despite gaps in our knowledge, the Recovery Team views the recovery of both populations to a more robust and sustainable status as technically and biologically feasible. Both populations have males, reproductive and pre-reproductive females, and the capacity to grow. During past periods of population growth, annual increases of approximately 3% have been recorded (see 3.3.2 in Population size and trends). Growth is unlikely to exceed these levels due to the low reproductive rate of the species, and therefore the recovery of Northern and Southern Resident Killer Whales can be expected to take more than one generation. Due to its small size, the Southern Resident Killer Whale population will be particularly vulnerable to catastrophic events and continue to have a high risk of extinction during this period.

Technologies and methodologies currently exist to reduce many of the threats facing Killer Whales, their prey and their habitat. As well, identification of critical habitat and the protection of all critical habitat areas from further degradation will ensure that Resident Killer Whales have sufficient habitat for recovery. The action plan for Northern and Southern Resident Killer Whales describes 98 recovery measures to address threats to the species and monitor its recovery, many of which are underway. As Killer Whales travel regularly across international borders, it is timely that both the Washington State and the United States federal governments are also engaged in conservation actions to promote the recovery of both populations.

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1. Introduction

Two distinct populations of Resident Killer Whales (*Orcinus orca*), known as the Northern and Southern Residents, occupy Canadian Pacific waters. Northern Resident Killer Whales are listed as Threatened and Southern Resident Killer Whales are listed as Endangered under the Species at Risk Act (SARA).

The Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada was finalized and published on the Species at Risk Public Registry in 2008. Minor amendments to the recovery strategy were made in 2011 to provide additional clarification regarding critical habitat for Northern and Southern Resident Killer Whales. In 2018, the recovery strategy was amended again to include identification of additional critical habitat for these populations (section 7) and to provide minor updates to background and species information. Further, minor changes were made to the formatting of this recovery strategy to adhere to current national templates where possible. This recovery strategy is considered one in a series of documents for this species that are linked and should be taken into consideration together; including the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) status report (COSEWIC 2008) and an action plan (DFO 2017a).

2. COSEWIC species assessment information

Date of Assessment: November 2008

Common name: Killer Whale - Northern Resident population

Scientific name: Orcinus orca

Status: Threatened

Reason for designation: The population is small, and is limited by the availability of its principal prey, Chinook Salmon. It is also at risk from physical and acoustical disturbance, oil spills and contaminants. However, this population has been increasing slowly since monitoring began in 1975.

Occurrence: Pacific Ocean

Status history: The "North Pacific Resident populations" were given a single designation of Threatened in April 1999. Split into three populations in November 2001. The Northern Resident population was designated Threatened in November 2001. Status re-examined and confirmed in November 2008. Last assessment based on an update status report.

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Date of Assessment: November 2008

Common name: Killer Whale - Southern Resident population

Scientific name: Orcinus orca

Status: Endangered

Reason for designation: The population is small and declining, and the decline is expected to continue. Southern Residents are limited by the availability of their principal prey, Chinook Salmon. There are forecasts of continued low abundance of Chinook Salmon. Southern Residents are also threatened by increasing physical and acoustical disturbance, oil spills and contaminants.

Occurrence: Pacific Ocean

Status history: The "North Pacific Resident populations" were given a single designation of Threatened in April 1999. Split into three populations in November 2001. The Southern Resident population was designated Endangered in November 2001. Status re-examined and confirmed in November 2008. Last assessment based on an update status report.

3. Species information

3.1 Description

The Killer Whale is the largest member of the dolphin family, Delphinidae. Its size, striking black and white colouring and tall dorsal fin are the main identifying characteristics. Killer Whales are mainly black above and white below, with a white oval eye patch, and a grey saddle patch below the dorsal fin. Each Killer Whale has a uniquely shaped dorsal fin and saddle patch, and most animals have naturally acquired nicks and scars. Individual Killer Whales are identified using photographs of the dorsal fin, saddle patch, and sometimes eye patches (Ford et al. 2000). They are sexually dimorphic. Maximum recorded lengths and weights for male Killer Whales are 9.0 m and 5,568 kg respectively, whereas females are smaller at 7.7 m and 4,000 kg (Dahlheim and Heyning 1999). The tall triangular dorsal fin of adult males is often as high as 1.8 m, while in juveniles and adult females it reaches 0.9 m or less. In adult males, the paddle-shaped pectoral fins and tail flukes are longer and broader and the fluke tips curl downward (Bigg et al. 1987).

Currently, most authorities consider Killer Whales to be one species, *Orcinus orca*, having regional variations in diet, size, colouration, and vocal patterns (Heyning and Dahlheim 1988; Ford et al. 2000; Barrett-Lennard and Ellis 2001). Two and possibly three distinct species have recently been proposed for Antarctic populations (Mikhalev et al. 1981; Berzin and Vladimorov 1983; Pitman and Ensor 2003), but they are not currently widely accepted (Reeves et al. 2004). In addition, recent genetic studies report little global variation in mitochondrial DNA suggesting that the population segregation indicated by the morphological differences described above is relatively recent (Barrett-Lennard 2000; Hoelzel et al. 2002).

Three distinct forms, or ecotypes, of Killer Whale inhabit Canadian Pacific waters: Transient, Offshore, and Resident. These forms are sympatric but socially isolated and differ in their

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dietary preferences, genetics, morphology and behaviour (Ford et al. 1998; 2000; Barrett-Lennard and Ellis 2001). Transient Killer Whales feed on marine mammals; particularly Harbour Seals (*Phoca vitulina*), porpoises, and sea lions (Ford et al. 1998). They travel in small, acoustically quiet groups that rely on stealth to find their prey (Ford and Ellis 1999). To the experienced eye, the dorsal fins of Transient Killer Whales tend to be pointed and their saddle patches are large and uniformly grey (Ford et al. 2000). Offshore Killer Whales are not as well understood as Residents and Transients. They feed primarily on elasmobranchs, but have also been documented to prey on teleost fishes, including Chinook Salmon (Heise et al. 2003; Ford et al. 2014). They often travel in large acoustically active groups of 30 or more whales, using frequent echolocation and social calls (Ford et al. 2000). The dorsal fins of Offshore Killer Whales are more rounded than those of Transients, and their saddle patches may either be uniformly grey or may contain a black region.

Resident Killer Whales are the best understood of the three ecotypes. They feed exclusively on fish and cephalopods and usually travel in acoustically active groups of 10 to 25 or more whales (Ford et al. 2000). The tips of their dorsal fins tend to be rounded at the leading edge and have a fairly abrupt angle at the trailing edge. Their saddle patches may be uniformly grey or contain a black region. The social organization of Resident Killer Whales is highly structured. Their fundamental unit is the matriline, comprising all surviving members of a female lineage. A typical matriline comprises an adult female, her offspring, and the offspring of her daughters. Both sexes remain within their natal matriline for life (Bigg et al. 1990). Social systems in which both sexes remain with their mother for life have only been described in one other mammalian species, the Long-Finned Pilot Whale (*Globicephala melas*) (Amos et al. 1993). Bigg et al. (1990) defined pods as groups of closely related matrilines that travel, forage, socialize, and rest with each other at least 50% of the time, and predicted that pods, like matrilines, would be stable over many generations. However, Ford and Ellis (2002) showed that inter-matriline association patterns in the Northern Residents have evolved over the past decade such that some of the pods identified by Bigg et al. (1990) now fail to meet the 50% criterion. Their analysis suggests that pods are best defined as transitional groupings that reflect the relatedness of recently diverged matrilines.

Each Resident pod has a unique dialect made up of approximately a dozen discrete calls (Ford 1989; 1991). These dialects can be distinguished, providing each pod with a unique acoustic signature. Dialects are probably learned from mothers and other associated kin and are highly stable over time (Ford et al. 2000). Their function is not entirely understood, although it appears that they play an important role in mate selection (Barrett-Lennard 2000, discussed below in section 3.4.1. Culture). Despite having distinct dialects, some pods share certain calls and call variants. Pods that share one or more calls belong to a common clan.

Resident Killer Whales that share a common range and that associate at least occasionally are considered to be members of the same community or population. There are two communities of Resident Killer Whales in British Columbia, the Northern Residents and the Southern Residents. Despite having overlapping ranges, these two communities are acoustically, genetically, and culturally distinct. The Northern Resident community consists of three clans, and the Southern Resident community consists of one.

The existence of two distinct populations of Resident Killer Whales using the waters of Washington and British Columbia has been recognized by both the Canadian and U.S. governments. In 2001 COSEWIC assessed Northern Residents as Threatened and Southern Residents as Endangered. In the United States, marine mammals are afforded federal protection under both the Marine Mammal Protection Act (MMPA) and, when listed, under the

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Endangered Species Act (ESA). The Southern Residents were listed as 'depleted' under the MMPA in 2003. In February 2006, Southern Resident Killer Whales were listed as Endangered under the ESA. In June 2004, the Washington State Department of Fish and Wildlife added Southern Resident Killer Whales to their Endangered Species List.

3.2 Distribution

3.2.1. Global range

Killer Whales are found in all oceans, and are most common in areas associated with high ocean productivity in mid to high latitudes (Forney and Wade 2006). They are able to tolerate temperatures ranging from those found in polar waters to the tropics, and have been recorded in water ranging from shallow (several metres) to open ocean depths (Baird 2001).

3.2.2. Canadian Pacific range

Killer Whales are found in all three of Canada's oceans, as well as occasionally in Hudson Bay and in the Gulf of St. Lawrence. They are rarely documented in the northwestern Atlantic, but their occurrence in the eastern Arctic has been increasing in recent years (COSEWIC 2008; Ferguson et al. 2010). In British Columbia (BC), Killer Whales have been recorded throughout almost all salt-water areas, including many long inlets, narrow channels, and deep embayments (Baird 2001). The three ecotypes of BC Killer Whales (Offshore, Transient, and Resident) do not appear to interact socially despite their overlapping ranges (Ford et al. 2000). Offshore Killer Whales are most often sighted on the continental shelf off the outer coast, but they are occasionally found in protected inside waters (Ford et al. 2000). Transient Killer Whales range throughout the area, as do Resident Killer Whales (Ford and Ellis 1999; Ford et al. 2000). Residents and Transients have occasionally been seen in close proximity to each other, but rarely interact (Ford and Ellis 1999). Figure 1 shows many place names mentioned in the text, as well as the general ranges of Northern and Southern Residents.

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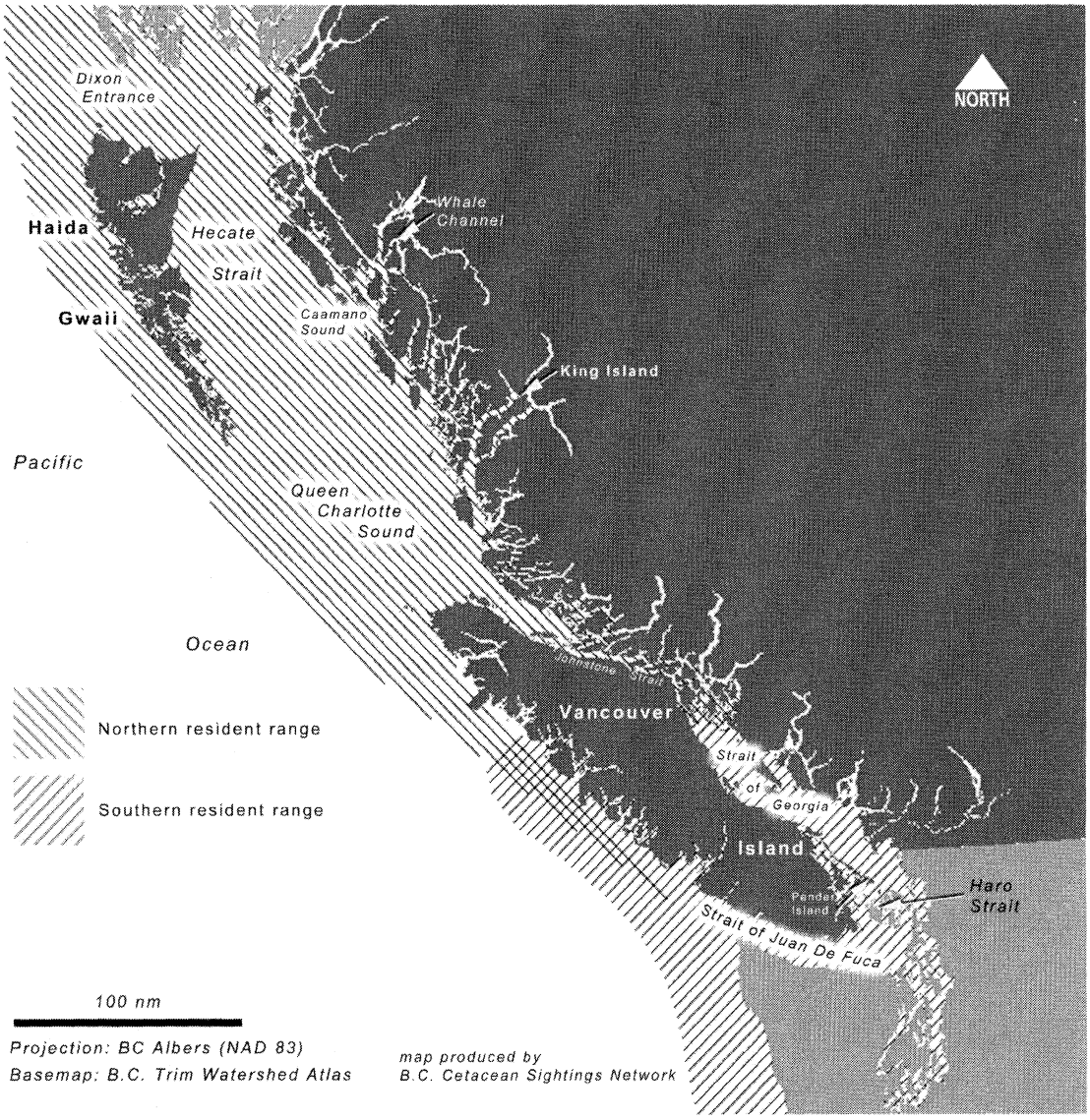

Figure 1. The coast of British Columbia and northwest Washington State showing the general ranges of Northern and Southern Resident Killer Whales

Southern Residents

The community of Southern Residents comprises a single acoustic clan, J clan, which is composed of three pods (referred to as J, K, and L) containing a total of 20 matrilines (Ford et al. 2000). The known range of this community is from southeastern Alaska to central California (Ford et al. 2017). During summer, its members are usually found in waters off southern Vancouver Island and Northern Washington State, where they congregate to intercept migratory salmon. The main area of concentration for Southern Residents is Haro Strait and vicinity off southeastern Vancouver Island (Figure 1), but they are commonly seen in Juan de Fuca Strait, and the southern Strait of Georgia (Ford et al. 2000). Of the three Southern Resident pods, J pod is most commonly seen in inside waters throughout the year, and appears to seldom leave the Strait of Georgia-Puget Sound-Juan de Fuca Strait region in most years (Ford et al. 2000). K and L pods are more often found in western Juan de Fuca Strait and off the outer coasts of

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Washington State and Vancouver Island. Unlike J pod, K and L pods typically leave inshore waters in winter and return in May or June. Their range during this period is poorly known, but they have been sighted as far south as Monterey Bay, California and as far north as Chatham Strait, southeastern Alaska (Ford et al. 2017).

Northern Residents

The Northern Resident Killer Whale community comprises three acoustic clans (A, G, and R) containing 34 matrilines, which range from Glacier Bay, Alaska to Grays Harbor, Washington (Ford et al. 2000; Ford et al. 2017). From June to October, some Northern Resident Killer Whales are frequently documented in Johnstone Strait and Queen Charlotte Strait (Figure 1), off northeastern Vancouver Island (Ford et al. 2000). Their range at other times of the year is not as well understood. Small groups of Northern Residents are sometimes seen in Johnstone Strait and other inshore waters along the BC coast in winter (Ford et al. 2000) but such sightings are rare even when seasonal changes in observer effort are taken into account.

There is no evidence that clans are restricted to specific regions within the range of their community, but some show an apparent preference for particular areas (Ford et al. 2000). For example, the most commonly sighted whales off northeastern Vancouver Island belong to A clan, whereas most of the whales sighted off the west coast of Vancouver Island belong to G clan, and R clan seems to prefer the northern part of the community's range. The range of Northern Residents overlaps with Southern Residents and with a community referred to as the southern Alaskan Residents. Northern Residents have never been seen associating with members of the Southern Resident community, and while they were observed travelling in proximity to a southern Alaskan Resident pod on one occasion (Dahlheim et al. 1997), it is not clear that social mixing took place. Genetic studies have not ruled out the possibility of occasional breeding between the Northern Resident and southern Alaskan Resident communities (Barrett-Lennard and Ellis 2001).

3.3 Population size and trends

3.3.1 Global

Little is known of the historic abundance of Killer Whales, except that they were "not numerous" (Scammon 1874). Since the early 1970s, photo-identification studies have provided reasonable population estimates for Killer Whales in the near-shore waters of the northeastern Pacific (Washington, BC, Alaska, and California), and similar work is now underway in several other coastal regions (e.g. the Gulf of California, the Russian Far East, New Zealand, Patagonia, Iceland, and Norway). In other areas line transect surveys have been used to provide population estimates. These include the Antarctic (25,000 whales, Branch and Butterworth 2001) and the Eastern Tropical Pacific (8,500 whales, Wade and Gerrodette 1993). As such, the worldwide abundance of Killer Whales is probably between 40,000 and 60,000 whales (Forney and Wade 2006). Trend data for Killer Whales are generally not available, with the exception of Killer Whales in BC (discussed below) and southern Alaskan Residents (population thought to be generally increasing, Matkin et al. 2008) and for a small population of Transients in Prince William Sound (AT1s, currently in decline, not likely to recover, Saulitis et al. 2002).

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3.3.2 British Columbia

There are no population estimates for Killer Whales in BC prior to 1960. Population censuses for Killer Whales are now conducted annually using photo-identification of individuals. Population trends vary by community and clan. For the purposes of the recovery strategy, data held by the Center for Whale Research (CWR), Friday Harbor, Washington, were used to describe the population status and trends of Southern Resident Killer Whales. Data held by the Fisheries and Oceans Canada Cetacean Research Program (DFO-CRP) were used to describe the Northern Resident Killer Whale population. Whales are censused slightly differently by each research group.[2]

The Southern Resident count includes all whales that are seen during a calendar year, and mortalities are included in the count depending on when they take place. For example, a whale that is not seen from March onwards is assumed to be dead. There is less certainty that a whale that is not seen in November or December is dead, and it may be included in the count. In recent years, observer effort has been high and most members of the Southern Resident community are photographed annually, so the count is reasonably precise.

The Northern Resident count also includes all whales that are documented during a calendar year. However, not all members of the Northern Resident community are seen each year, so the count data are generally less precise than for the Southern Residents.

In 2017, there were a total of approximately 385 Northern and Southern Resident Killer Whales (CWR unpublished data; DFO-CRP unpublished data). By comparison there were approximately 521 Transient (Ford et al. 2013) and 300 Offshore Killer Whales (Ford et al. 2014), although these numbers are less precise than the Resident counts, because not all individuals are encountered each year (Ford et al. 2000).

Southern Residents

The size of the Southern Resident community has been known since the first complete photo-identification census in 1976 (CWR unpublished data). Figure 2 shows the size of each pod as well as the fluctuation in the total population of the Southern Resident community from 1976-

[2] Note that there are small discrepancies in the Southern Resident counts in the literature due to different methods of recording when whales are considered to enter or leave the population.

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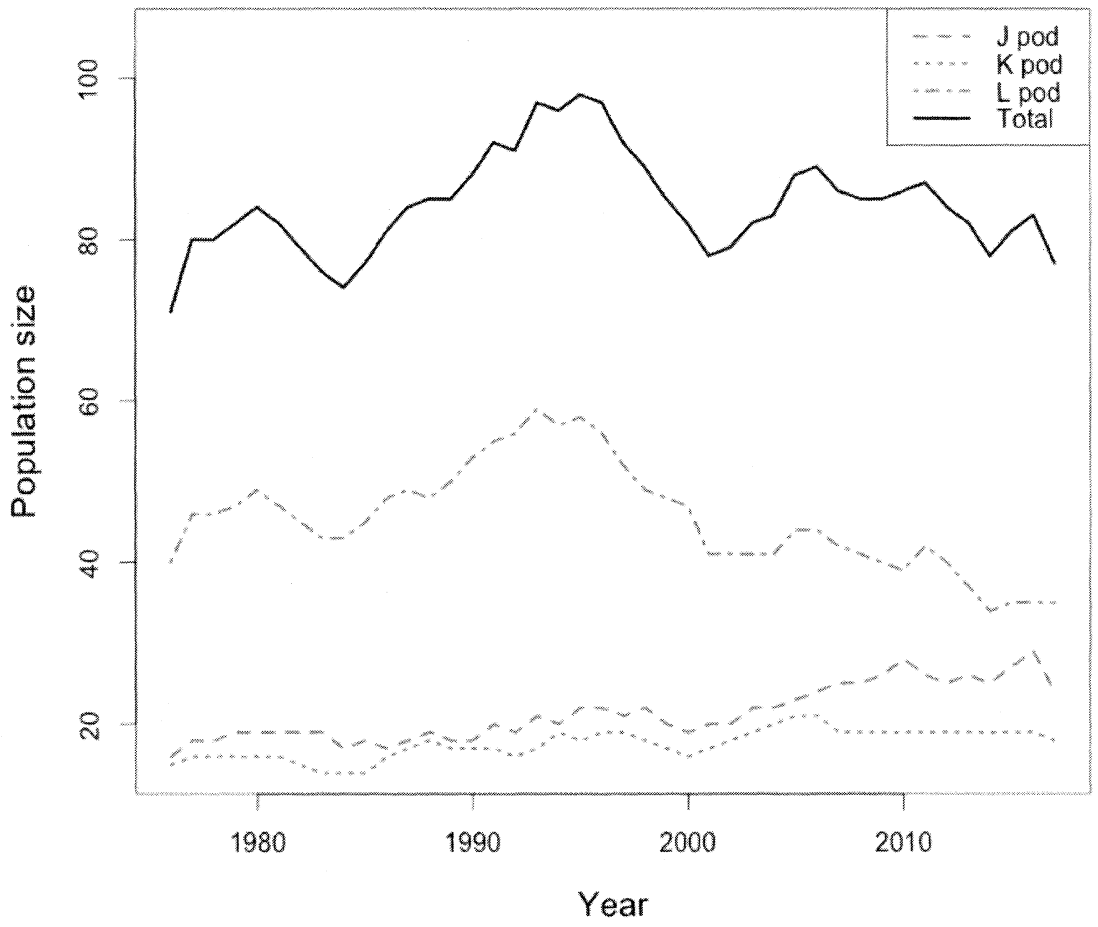

Figure 2. Population size and trends for Southern Resident Killer Whales from 1976-2017. Data source: Center for Whale Research (unpublished).

Although the Southern Resident community was likely increasing in size in the early 1960s, the number of whales in the community dropped dramatically in the late 1960s and early 1970s due to live capture for aquariums (Bigg and Wolman 1975). A total of 47 individuals that are known or likely to have been Southern Residents were captured and removed from the population (Bigg et al. 1990). The population increased 19% (3.1% per year) from a low of 70 individuals after the live-captures ended in 1973, to 83 whales in 1980, although the growth rate varied by pod (Figure 2). From 1981-1984 the population declined 11% (-2.7% per year) to 74 whales as a result of lower birth rates, higher mortality for adult females and juveniles (Taylor and Plater 2001), and lower numbers of mature animals, especially males, which was caused by selective cropping in previous years (Olesiuk et al. 1990). From 1985 to 1995, the number of Southern Residents increased by 34% (2.9% per year) to 99 animals. A surge in the number of mature individuals, an increase in births, and a decrease in deaths contributed to the population growth. Another decline began in 1996, with an extended period of poor survival (Taylor and Plater 2001; Krahn et al. 2002) and low fecundity (Krahn et al. 2004) resulting in a decline of 17% (-2.9% per year) to 81 whales in 2001. Since 2001, the population has fluctuated between 76 and 89 individuals, and consisted of 76 members in 2017 (CWR unpublished data).

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Population viability analyses (PVA) have been used to estimate the extinction risk of Southern Resident Killer Whales (Taylor and Plater 2001; Krahn et al. 2002; 2004). As would be expected, extinction risk increases when the frequency and magnitude of catastrophes such as oil spills and disease epidemics are elevated. These models predict that if the mortality and reproductive rates of the 1990s persist, there is a 6-100% probability that the population will be extinct within 100 years, and a 68-100% risk that the population will be extinct within 300 years. Extinction of the Southern Resident population can be regarded as inevitable in these scenarios under the assumptions of the analyses, and catastrophic events simply hasten its demise. When the mortality and reproductive rates of the entire 1974-2000 period are used, the risk of the population going extinct declines to 0-55% over 100 years and 2-100% over 300 years. A more recent PVA predicted survival and recovery rates of Southern Resident Killer Whales based on sex-structured models and high-quality demographic data that encompassed one Killer Whale generation (25 years; 1987-2011). These models predicted an annual decline of 0.91% for this population, with an extinction risk of 49% over a 100-year period (Velez-Espino et al. 2014). A PVA that explored the relative importance of the primary anthropogenic threats (Chinook prey availability, noise and disturbance, and contaminants) to Southern Resident Killer Whale population trajectories was constructed by Lacy et al. (2017). These models predicted that prey limitation had the greatest potential to impact population growth, but that either higher levels of noise and disturbance or higher levels of PCB contamination would also be sufficient to shift population trajectories from slow positive growth into decline.

Northern Residents

The Northern Resident community was likely increasing in size during the early 1960s, but was cropped by the live capture fishery of 1964-1973, during which at least 14 individuals were removed. Twelve of those are known to have been from one pod (A5, Bigg et al. 1990). When first censused in 1974, the Northern Resident community was estimated to contain approximately 120 whales. Although abundance estimates for Northern Residents are less precise than those for Southern Residents because not all matrilines are seen each year, it appears that the Northern Resident community grew steadily during the period 1974 to 1991 (approximately 3.4% per year, Figure 3). The population increased to 220 animals in 1997 (growth of 3.0% per year, Towers et al. 2015). Several reasons have been postulated for the Northern Residents' success relative to Southern Residents during this period: the population's larger size may have buffered changes in birth and death rates, fewer animals were captured during the live-capture fishery (Olesiuk et al. 1990), and in general they are exposed to less disturbance and environmental contamination. Between 1997 and 2003, the Northern Resident community declined 7% to 205 whales in 2003 (Towers et al. 2015, Figure 3). The increased mortality rates that drove the declines during this period for both Northern and Southern Residents coincided with a period of reduced range-wide Chinook Salmon abundance (Ford et al. 2010). The Northern Resident Killer Whale population has been increasing at an annual average rate of 2.9% since that time, reaching approximately 309 individuals in 2017 (Towers et al. 2015; DFO-CRP unpublished data). Population viability analyses based on sex-structured models and high-quality demographic data predicted a 1.58% annual increase and an extinction risk of 0% for Northern Resident Killer Whales over a 100-year period (Velez-Espino et al. 2014).

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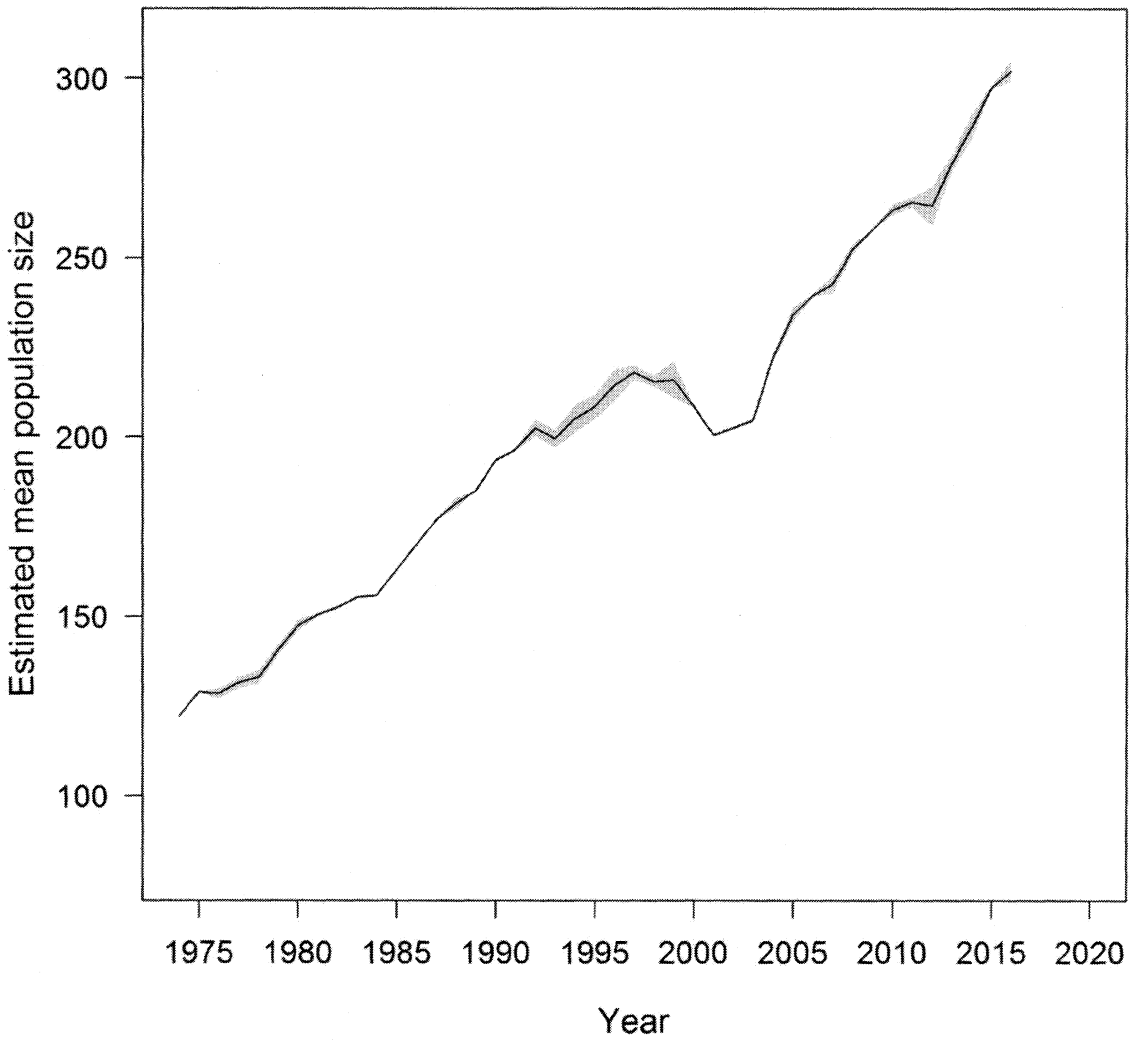

Figure 3. Population size and trends for Northern Resident Killer Whales from 1974 to 2016. In years with uncertainty, the minimum and maximum population sizes are represented with grey shading. Data sources: Towers et al. (2015); DFO-CRP (unpublished).

3.4 Natural factors affecting population viability and recovery

It is important to note that Northern and Southern Resident Killer Whales have been studied primarily in protected waters during the months of May to October (Ford et al. 1998; 2000). Their behaviour and ecology in other areas and seasons is less well-known.

3.4.1. Biological limiting factors

The following description of the biology of Killer Whales is based on data from both the Northern and Southern Resident populations. Essentially, Resident Killer Whales feed on fish and do not switch to marine mammals when their principal prey species are not abundant. They are long-lived animals with no natural predators. On average, females produce a single calf every five to

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six years during a 25-year reproductive period, and as a result the population has an inherently slow rate of growth. Resident Killer Whales have strong cultural traditions that influence their association and mating behaviours, which also limits the capacity for the population to grow. More detailed information on the factors that may limit the ability of Resident Killer Whale populations to grow is provided below.

Diet

Although Killer Whales feed on a wide range of prey species globally, Northern and Southern Resident Killer Whales are dietary specialists, feeding primarily on fish (Ford et al. 1998). Unlike Transient Killer Whales, Resident Killer Whales do not feed on marine mammals and the breadth of their diet appears to be quite limited. Extensive surface observations and collection of prey fragments from sites of kills by Resident Killer Whales have shown that these whales forage selectively for certain salmonids regardless of their abundance (Ford and Ellis 2005; Ford et al. 2010; Hanson et al. 2010). Chinook Salmon is the predominant prey species taken by both Northern and Southern Resident communities during May-August, but Chum Salmon is more prevalent in September-October. Coho Salmon (*Oncorhynchus kisutch*) are taken in low numbers in June-October, but Sockeye (*O. nerka*) and Pink (*O. gorbuscha*) Salmon are not significant prey species despite their high seasonal abundance. Non-salmonid fishes do not appear to represent an important component of Resident Killer Whale diet during May-October. Stomach content analysis from stranded Killer Whales and fecal sampling from live whales also support the importance of Chinook and Chum Salmon in Resident Killer Whale diet (Ford et al. 1998; Hanson et al. 2010).

Resident Killer Whales likely forage selectively for Chinook Salmon over other available salmonids because of the large size, high fat content, and year-round availability of this species in coastal waters (Ford et al. 1998; Ford and Ellis 2005). Killer Whales feeding at Langara Island in Haida Gwaii (Queen Charlotte Islands) are known to feed on Chinook from stocks returning to rivers as far north as northern BC and as far south as California (Ford et al. 2017).
The movement patterns of Resident Killer Whales are influenced by the availability of their preferred prey. During the summer months, Resident Killer Whale distribution is associated spatially and temporally with the migratory routes of Chinook Salmon as this important prey species returns to natal streams to spawn (Ford and Ellis 2005). In fall, the presence of Chum Salmon appears to influence the movements of Resident Killer Whales. In Johnstone Strait, Chum Salmon is the primary prey species taken by Northern Residents from late September through October (Ford and Ellis 2005). Fall movements of Southern Resident pods into Puget Sound were roughly correlated with runs of Chum Salmon, as well as Chinook (Osborne 1999). Recent winter sightings of Southern Resident Killer Whales in central California were coincident with high local densities of Chinook Salmon (N. Black, Monterey Bay Whale Watch, unpublished data).

Social organization

The social structure of Killer Whales in BC appears to be complex and differs among the three ecotypes (Ford and Ellis 1999; Ford et al. 2000). The social structure of Resident Killer Whales is the best understood, and one of its unique features is that there is no permanent dispersal of either sex from the natal group. The basic social unit of Resident Killer Whales is the matriline, composed of an older female (or matriarch), her male and female offspring, and the offspring of her daughters (Ford et al. 2000). Because matriarchs have long life spans, some matrilines may contain four or more generations. In over three decades of study, immigration and emigration have rarely been observed (Bigg et al. 1990; Ford et al. 2000). Two recent cases of juvenile

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Resident Killer Whales leaving their matrilines and traveling alone are considered to be exceptional, isolated incidents. One, a female calf referred to as A73, or Springer, was separated from her pod shortly after her mother died and was observed alone after a brief period of association with a pod from another clan. She was subsequently reunited with her pod and joined another matriline. The second incident involved a male calf L98, or Luna, who became isolated from his pod and all other Killer Whales for unknown reasons in 2001.

Although individuals do not disperse from their natal group, matriline splitting does occasionally occur. For example, sisters often begin to spend more and more time apart after their mother dies, and their own matrilines may eventually become socially independent (Bigg et al. 1990; Ford et al. 2000; Ford and Ellis 2002). Stredulinsky (2016) conducted an analysis of matriline fission and found that group splitting is driven primarily by population growth and by the demographic composition of groups.

Reproductive parameters

Females reach sexual maturity, defined as the age of first successful pregnancy, at 15 years on average (range 12-18 years) (Olesiuk et al. 1990). Males reach sexual maturity, defined as when the dorsal fin shape changes sufficiently to distinguish males from females, at 15 years on average (range 10-17 years). Males reach physical maturity (when the dorsal fin reaches its full height) at about 20 years. Genetic paternity testing indicates that males rarely reproduce before 25 years of age (Barrett-Lennard 2000). The gestation period of Killer Whales is typically 16 to 17 months, one of the longest of all whales (Walker et al. 1988; Duffield et al. 1995). Only single calves are normally born. Only one possible case of twins has been reported (Olesiuk et al. 1990).

Approximately equal numbers of males and females are born (Dahlheim and Heyning 1999) and newborn calves are between 218 and 257 cm long (Olesiuk et al. 1990). Haenel (1986) estimated that calves are weaned at one to two years of age. The interval between calving is usually about five years for Northern Residents and six years for Southern Residents (DFO-CRP unpublished data). However the interval is highly variable, ranges from two to 12 years, and increases with age until menopause (Olesiuk et al. 1990). Overall, females have an average of five viable calves in a 25 year reproductive lifespan (Olesiuk et al. 1990). Calving occurs year-round, but appears to peak between fall and spring.

Mating behaviour

Mating behaviour between male and female Killer Whales has rarely been observed in the wild. However, genetic evidence has revealed that Resident Killer Whales have a propensity to mate outside their matriline (and clan, in the case of Northern Residents) but inside their community (Barrett-Lennard 2000; Barrett-Lennard and Ellis 2001). This minimizes the possibility of inbreeding very effectively, but restricts the options for mating if the population becomes very small. For example, in the Southern Resident community there may be an extreme shortage of sexually mature males, particularly for L pod females, assuming females select mates outside their pod.

Survival and longevity

Survival of Resident Killer Whales varies with age. Neonate mortality (from birth to six months of age) is high, reported at approximately 43% for all Residents (Olesiuk et al. 1990), and 42% for Northern Residents (Bain 1990). Accordingly, average life expectancy is reported for an animal

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that survives the first six months, and is estimated to be 50 years for females and 29 years for males (Olesiuk et al. 1990). Maximum longevity for females is an estimated 80-90 years and for males is 50-60 years (Olesiuk et al. 1990). Although a typical trait in most mammals, the shorter lifespan of males could be related to sexual selection (Baird 2000) or to higher levels of persistent chemicals, such as PCBs (Ross et al. 2000). The bioaccumulation of toxins is discussed in greater detail in section 4.2.1. Atypical, however, is the prolonged post reproductive period of females, discussed in the following section. Recent evidence suggests that declines in both the Northern and Southern Resident populations (all age and sex classes) can be attributed to an increase in mortality rates (Ford et al. 2005) as well as a decrease in fecundity for Southern Residents (Krahn et al. 2004). The potential causes of the population declines are discussed in section 4.

Reproductive senescence

The average life span of female Resident Killer Whales is approximately 50 years, but on average they produce their last calf at 39, and a significant number live to 70 years or more (Olesiuk et al. 1990). The 'grandmother hypothesis' suggests that the presence of older females in a group can increase the survival of offspring, and this may indeed be true for Killer Whales (see discussion under Culture below). In any case, when evaluating the status of Killer Whale populations, it is important to consider the age structure of the population and to note that post-reproductive adult females are no longer able to contribute directly to population growth. In an endangered population of Transient Killer Whales in southern Alaska (AT1s), no calves have been born since 1984. Since the remaining females are near or beyond their reproductive years, the population is on the verge of extinction (Saulitis et al. 2002), with virtually no prospect for recovery, even though it may persist for many more years.

Culture

Culture refers to a body of information and behavioural traits that are transmitted within and between generations by social learning. Until recently, culture was generally considered a distinguishing feature of human societies. Of late, the concept of culture has been broadened to include non-human mammals and birds (reviewed in Rendell and Whitehead 2001) and there is strong evidence for it in both Northern and Southern Resident Killer Whales, and southern Alaskan Resident Killer Whales (Ford 1991; Ford et al. 1998; Barrett-Lennard et al. 2001; Yurk et al. 2002). There is also evidence for culture in other cetaceans, such as Sperm Whales (Whitehead and Rendell 2004), although not to the same extent as for Resident Killer Whales (Rendell and Whitehead 2001).

Dialects are the best studied form of culture in Killer Whales. A calf learns its dialect from its mother and other closely related adults, retains it for life, and passes it on to the next generation with few modifications (Ford 1991; Deecke et al. 2000; Miller and Bain 2000). These culturally-transmitted dialects may play an important role in inbreeding avoidance, since females apparently prefer males from dialect groups other than their own (Barrett-Lennard 2000; Yurk et al. 2002).

Culture also appears to play an important role in feeding, with dietary preferences and probably foraging techniques and areas passed on culturally (Ford et al. 1998). Culture may also select for longevity in Killer Whales, as it provides a mechanism for older individuals to increase the fitness of their offspring and relatives by transferring knowledge to them (Barrett-Lennard et al. 2001). Foster et al. (2012) found that both reproductive and post-reproductive female Resident Killer Whales increase their own offspring's survival. This is particularly evident for older male

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offspring: the death of post-reproductive female Resident Killer Whales increases mortality risk by almost 14-fold in their >30 year old sons. Prey sharing among Resident Killer Whales is likely one way that older individuals increase the fitness of their offspring. Cooperative prey sharing has been documented by all age and sex classes of Resident Killer Whales, but adult females share most frequently (Wright et al. 2016). Adult female Northern Resident Killer Whales share over 90% of the fish that they catch, most often with their offspring (Ford and Ellis 2006; Wright et al. 2016), and thus play a significant role in provisioning these members of their matrilines.

Culture may help animals adapt to changing environments by allowing them to learn from each other in addition to learning from experience. For example, based on differences in foraging success by sympatric clans of Sperm Whales under different climatic regimes, Whitehead et al. (2004) suggest that cultural diversity may be even more significant than genetic diversity in helping Sperm Whales to deal with a changing ocean climate. While we do not know if this is true for Resident Killer Whales, we do know that they respond culturally to anthropogenic changes in their environment. In Alaska, Resident Killer Whales responded to longline fishing in areas of Alaska by learning to raid the gear and take fish, and this behaviour spread rapidly throughout the population (Matkin and Saulitis 1994). Depredation of Pacific Halibut longline fisheries and salmon troll fisheries is also known to occur in BC waters (Ford 2014).

Depensation

Resident Killer Whale populations are at risk simply by virtue of their small population size. In general, small populations have an increased likelihood of inbreeding and lower reproductive rates, which can lead to low genetic variability, reduced resilience against disease and pollution, reduced population fitness, and elevated extinction risks due to catastrophic events. Pacific Resident Killer Whale populations are considered small, at 76 Southern Residents and approximately 309 Northern Residents in 2017 (CWR unpublished data; DFO-CRP unpublished data). If either Resident population is reduced further, they may be faced with a shortage of suitable mates. Among the Southern Residents, L pod females may be particularly vulnerable to this scenario because of the small number of reproductive males in J and K pod. Even under ideal conditions, the population will recover slowly because Killer Whales calve relatively infrequently.

Northern Resident Killer Whales have been shown to minimize inbreeding and its inherent risks by consistently selecting unrelated mates (Barrett-Lennard and Ellis 2001), suggesting that this population is more genetically viable than would be expected from population size alone. In contrast, recent evidence of incestuous mating among Southern Resident Killer Whales presented by Ford et al. (2018) suggests that they may be substantially more vulnerable to negative effects of inbreeding, particularly if the population remains at or below its present size for multiple generations.

Natural mortality

Killer Whales have no recorded predators, other than humans. There are several potential sources of natural mortality that may impact Killer Whales: entrapment in coastal lagoons or constricted bays, accidental beaching, disease, parasitism, biotoxins, and starvation (Baird 2001). However, it cannot be ruled out that anthropogenic factors may make Killer Whales more vulnerable to natural sources of mortality. For example, disturbance from intense noise may cause animals to strand (Perrin and Geraci 2002). In this case, the proximate cause of death, stranding, is a natural source of mortality, but the death would be ultimately human-caused.

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3.4.2. Other natural limiting factors

Entrapment and/or accidental beaching

Accidental beaching and entrapment are sometimes a source of mortality for Killer Whales. At least four mass strandings involving more than 36 individuals occurred in BC in the 1940s (Cameron 1941; Carl 1946; Pike and MacAskie 1969; Mitchell and Reeves 1988). Although the causes of mass strandings in toothed whales are uncertain, disease, parasitism, and disturbance from intense underwater noise have been suggested as possible causes (Perrin and Geraci 2002). Two possible cases of temporary entrapment have been reported for Southern Resident Killer Whales (Shore 1995; 1998). In 1991, J pod spent 11 days in Sechelt Inlet, apparently reluctant to exit through a constricted entrance with tidal rapids. In 1997, 19 Killer Whales spent 30 days in Dyes Inlet, Puget Sound, possibly because they were reluctant to pass under a noisy bridge (Shore 1998).

Disease and parasitism

Diseases in captive Killer Whales have been well studied, but little is known of diseases in wild Killer Whales (Gaydos et al. 2004). Causes of mortality for captive Killer Whales include pneumonia, systemic mycosis, other bacterial infections, and mediastinal abscesses (Greenwood and Taylor 1985). Of 16 pathogens identified in Killer Whales, three have been detected in wild individuals: marine *Brucella*, *Edwardsiella tarda*, and cetacean poxvirus (Gaydos et al. 2004). A severe infection of *E. tarda* resulted in the death of a Southern Resident male in 2000 (Ford et al. 2000). Marine *Brucella* may cause abortions and reduced fecundity in Killer Whales (Gaydos et al. 2004). Cetacean poxvirus can cause mortality in calves and causes skin lesions (Van Bressem et al. 1999). Twenty-seven additional pathogens have been identified in sympatric odontocetes that may be transmittable to Killer Whales (Gaydos et al. 2004).

External parasites of Killer Whales have been reported in Mexico (Black et al. 1997), but none have been observed on Resident Killer Whales in BC (Baird 2001). Internal parasites of Killer Whales include various trematodes, cestodes, and nematodes (Heyning and Dahlheim 1988; Raverty et al. 2014). These endoparasites are usually acquired through infected food, but the amount of infection and their contribution to Killer Whale mortality are not known at this time.

Algal blooms

Harmful algal blooms (HABs) are blooms of algae that produce biotoxins such as paralytic shellfish poison, domoic acid, saxitoxin, and brevitoxin. Such toxins can accumulate in the tissues of species that ingest them and are magnified up the food chain. Mortality of Humpback Whales (*Megaptera novaeangliae*) off Massachusetts in 1987 and California Sea Lions (*Zalophus californianus*) in California in 1998 have been linked to biotoxin exposure (Geraci et al. 1989; Scholin et al. 2000). Several species of marine mammals have been shown to have a potential susceptibility to the neurotoxic effects of biotoxins (Trainer and Baden 1999). Given the apparent increase in HAB event frequency, and the potential for toxic effects in Killer Whales, there may be some risk to Resident Killer Whales exposed to biotoxins through HABs, although the risk is thought to be low (Krahn et al. 2002).

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Regime shifts

In the North Pacific, there are widespread changes that occur in the circulation and physical properties of the ocean. These changes take place on decadal time scales and are referred to as 'regime shifts' (see reviews in Francis et al. 1998; Benson and Trites 2002). Such shifts may happen quite quickly, and result in dramatic changes in the distribution and/ or abundance of many species, ranging from zooplankton to fish and possibly marine mammals and seabirds. If the distribution or abundance of Resident Killer Whale prey changed significantly following a regime shift, it is possible that Killer Whales could be affected.

4. Threats

4.1. Historic threats

Pliny the Roman scholar first described a Killer Whale as an "enormous mass of flesh armed with savage teeth" during the first century AD. Since then written records have often depicted Killer Whales as savage, destructive, ferocious, and a danger to humans. However, they were rarely hunted, with the exception of Japanese, Norwegian and Russian whalers. Contemporary fishermen have viewed the Killer Whale as a competitor for their fish and a threat to their livelihood (Olesiuk et al. 1990; Ford et al. 2000). The live capture of Killer Whales for aquariums in the 1960s and early 1970s reduced local populations, some drastically.

Harvest and live captures

Killer Whales were hunted commercially, but whaling operations generally targeted other species of whales. In Canada, there are only a few harvest records of Killer Whales, most of which took place on the east coast and in the Arctic (e.g. Mitchell and Reeves 1988; Reeves and Mitchell 1988). However, large numbers of whales were taken in other areas of the world. The Japanese killed 60 Killer Whales per year between 1948 and 1957 (Nishiwaki and Handa 1958). Norwegian whalers culled 2,345 Killer Whales between 1938 and 1981 (Øien 1988). The former USSR captured approximately 25 Killer Whales per year in the Antarctic and harvested 906 whales in one season (Berzin and Vladimirov 1983). In 1982, the International Whaling Commission recommended a halt to the harvest of Killer Whales until the impact on populations was better understood. No Killer Whales have been reported taken since then, though small numbers may continue to be caught but remain unreported. For example, genetic testing has revealed the presence of Killer Whale in meat sold in Japanese and Korean markets (Baker et al. 2000).

In the late 1960s and early 1970s, Killer Whales were sought extensively for display in public aquaria. While they were captured from various areas throughout the world, the majority came from the waters of the northeastern Pacific Ocean. Between 1962 and 1974, 68 Killer Whales were taken from this area, 47 of which are known or assumed to be Southern Residents (Olesiuk et al. 1990). This cropping clearly had a major impact on the Southern Resident community, which numbered only 70 animals in 1974, and has likely affected productivity of the community for many years after the live captures ended in 1975.

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Intentional shootings

Historically, negative attitudes towards Killer Whales in BC led to efforts by both government and individuals to cull local populations through shooting. In 1960, the federal Fisheries Department mounted a land-based machine gun near sports fishing lodges near Campbell River to reduce the number of Killer Whales (Ford et al. 2000). Fortunately it was never fired. In the 1960s and 1970s, approximately one quarter of whales live captured for aquaria had gunshot wounds (Ford et al. 2000). Societal attitudes towards Killer Whales have changed since 1974, and fresh bullet wounds are now rarely, if ever, seen on whales in BC and Washington (Ford et al. 2000), although even occasional shootings could limit population growth.

Acoustic harassment devices

Aquaculture farms in Washington and BC have used acoustic harassment devices (AHDs) that emit loud signals underwater to reduce depredation by Harbour Seals and sea lions. Some signals may be heard from up to 50 km away (Morton and Symonds 2002). Their use at a farm near Northern Vancouver Island was associated with significant declines in the use of nearby waters by both Resident and Transient Killer Whales (Morton and Symonds 2002). Harbour Porpoise abundance was also found to drop dramatically when AHDs were in active use (Olesiuk et al. 2002). The use of AHDs is no longer permitted in BC or in Washington. They are still used at Ballard Locks in Seattle to deter sea lions, but the configuration of the canal limits the amount of noise escaping to the open ocean (Bain 1996).

4.2. Current threats

A variety of threats may directly impact Northern and Southern Resident Killer Whale populations in BC, particularly because of their small population sizes. Threats include environmental contaminants (including oil spills), reduced prey availability, disturbance and noise pollution, each of which is discussed in more detail below. An additional emerging threat, vessel strikes, was identified during a science-based review of recovery actions for Southern Resident Killer Whales (DFO 2017c). Other threats such as mortality in fishing gear have posed a threat to cetacean populations in other areas, and could potentially impact Resident Killer Whales. Climate change is affecting entire ecosystems, and it is likely that in order to survive, Killer Whales will have to adapt to the consequences of local changes in their prey base. How current threats may act synergistically to impact Killer Whales is unknown, but in other species multiple stressors have been shown to have strong negative and often lethal effects, particularly when animals carry elevated levels of environmental contaminants (Sih et al. 2004).

The extent to which Northern and Southern Resident Killer Whales are affected by anthropogenic threats varies, depending on the threat. For example, Northern Resident Killer Whales may be more vulnerable to seismic surveys on the north coast, particularly if the moratorium on oil and gas exploration is lifted, whereas Southern Residents, by virtue of the waters they spend significant time in, may be more vulnerable to environmental contaminants.

4.2.1. Environmental contaminants

There are numerous chemical and biological pollutants that may directly or indirectly impact Resident Killer Whales, ranging from persistent organic pollutants (POPs) to antibiotic resistant bacteria and exotic species. Below we describe the major types of contaminants, their sources and their potential effects on Killer Whales (where known). For a list of the acronyms mentioned

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below, see Appendix C. There have been only a handful of studies that have measured contaminant levels in Killer Whales, and for obvious reasons no controlled experiments have been done to assess how these contaminants may affect them directly. However, the effects of contaminants on other species such as pinnipeds are better understood, and in many cases can be generalized to Killer Whales, particularly because the physiological processes of mammals are similar across different species. This 'weight of evidence' approach is outlined elsewhere for marine mammals (Ross 2000).

Although it is important to assess the direct effects of contaminants, Fleeger et al. (2003) make an important case for considering their 'indirect' effects on community structure, as well as on individual organisms and their behaviour. In a review of 150 studies, contamination resulted in changes in species abundance and community structure. Sixty percent of the communities that were experimentally manipulated showed a reduction in upper trophic level predators, which masked, enhanced or confused the interpretation of any direct effects of contaminants on individual organisms or species.

Persistent organic pollutants (POPs)

There are likely thousands of chemicals to be found in the Killer Whales of BC, but a few key classes are of particular concern today. Studies of environmental contaminants in Resident and Transient Killer Whales in BC and Washington have revealed that they are among the most contaminated mammals in the world (Ross et al. 2000; 2002; Krahn et al. 2009). Killer Whales are vulnerable to accumulating high concentrations of POPs because they are long-lived animals that feed high in the food web (Ross et al. 2000; 2002; Rayne et al. 2004; Ross 2006). POPs are persistent, they bioaccumulate in fatty tissues, and are toxic, features that have led to increased regulatory scrutiny of these chemicals by authorities around the world. POPs include 'legacy' contaminants such as the polychlorinated biphenyls (PCBs) and the organochlorine pesticide DDT which are no longer widely used in industrialized countries, but remain persistent in the environment. The so-called 'dirty dozen' POPs are encompassed under the terms of the Stockholm Convention which aims to phase out use of chemicals of global ecotoxicological concern. They also include the polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs or furans), by-products of incomplete combustion, of pesticide manufacture, and of the (now regulated) use of elemental chlorine and pentachlorophenol (PCP) in pulp and paper bleaching and wood treatment processes, respectively. In recent years, regulations have resulted in a reduction in the release of such contaminants into the marine environment (Hagen et al. 1997).

Contaminants of 'current concern' in the industrial world include the new generation of polybrominated trienylethers (PBTs), flame retardants such as polybrominated diphenylethers (PBDEs), as well as currently used pesticides. Table 1 lists the POPs that are a concern for Resident Killer Whales, and the reader is referred to Grant and Ross (2002) for a more thorough synthesis of what is known about the risks that contaminants pose to Southern Resident Killer Whales.

Polychlorinated biphenyls (PCBs)

Surprisingly high concentrations of PCBs are found in both Southern and Northern Resident Killer Whales relative to marine mammals from other parts of the world (Ross et al. 2000). The PCB levels found in Transients and Southern Residents exceed those found in St. Lawrence Beluga Whales (*Delphinapterus leucas*) by a factor of two to four times, and are considerably higher than thresholds for PCB-associated reproductive impairment, skeletal abnormalities,

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immunotoxicity and endocrine disruption in pinnipeds (reviewed in Ross 2000). Ross et al. (2000) found that PCB concentrations increase with age in male Killer Whales, but decline in reproductively active females. Consistent with observations in other mammals, including humans, reproductive females pass PCBs to their offspring, particularly the first born, during gestation and lactation (Tanabe and Tatsukawa 1992; Borrell et al. 1995; Ylitalo et al. 2001).

Dioxins and furans

Levels of dioxins and furans were found to be low in the blubber of Resident and Transient Killer Whale populations in BC (Ross et al. 2000). This may be partly explained by low levels of dioxins and furans in their diet, but Killer Whales may also metabolize and excrete dioxin-like compounds more effectively than PCBs (Ross 2000).

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Table 1. Persistent organic pollutants that may pose a risk to Resident Killer Whales.

Pollutant	Use/Source	Persistent	Bio-accumulate	Risk
DDT (Dichlorodi-phenyl trichloroethane	pesticide used in some countries, banned in North America, persists in terrestrial runoff >30 years post ban, enters atmosphere from areas where still in use	yes	yes	reproductive impairment, immunosuppression, adrenal and thyroid effects
PCBs (Polychlorinated Biphenyls)	electrical transformer and capacitor fluid, limited use in North America but enters environment from runoff, spills, and incineration	yes	yes	reproductive impairment, skeletal abnormalities, immunotoxicity, and endocrine disruption
Dioxins and Furans	by-product of chlorine bleaching, wood product processing and incomplete combustion. Mills less of a source now. Current sources include burning of salt-laden wood, municipal incinerators, and residential wood and wood waste combustion; in runoff from sewage sludge, wood treatment	yes	yes	thymus and liver damage, birth defects, reproductive impairment, endocrine disruption, immunotoxicity, and cancer
PAHs (Persistent Polycyclic aromatic hydrocarbons)	by-product of fuel combustion, aluminium smelting, wood treatment, oil spills, metallurgical and coking plants, pulp and paper mills	yes	no	carcinogenic
flame retardants, esp. PBBs and PBDEs (Polybrominated diphenyl ethers)	flame retardants; in electrical components and backings of televisions and computers, in textiles and vehicle seats, ubiquitous in environment. 2/3 product PBDEs banned in Europe. Same two products withdrawn from North American marketplace in 2005, but one (deca) product still used globally.	yes	yes	endocrine disruption, impairs liver and thyroid
PFOs (Perfluro-octane sulfonate)	stain, water and oil repellent (included in Scotchgard until recently), fire fighting foam, fire retardants, insecticides and refrigerants, ubiquitous in environment	yes	yes but in blood, liver, kidney and muscle	promotes tumour growth
TBT, DBT (Tributyltin Dibutyltin)	antifoulant pesticide used on vessels	yes	yes	unknown but recently associated with hearing loss
PCPs (Polychlorinated paraffins)	flame retardants, plasticizers, paints, sealants and additives in lubricating oils	yes	yes	endocrine disruption
PCNs (Polychlorinated napthalenes)	ship insulation, electrical wires and capacitors, engine oil additive, municipal waste incineration and chlor-alkali plants, contaminant in PCBs	yes	yes	endocrine disruption
APEs (Alkyl-phenol ethoxylates)	detergents, shampoos, paints, pesticides, plastics, pulp and paper mills, textile industry found in sewage effluent and sediments	moderate	moderate	endocrine disruption
PCTs (Polychlorinated terphenyls)	fire retardants, plasticizers, lubricants, inks and sealants, enters environment in runoff	yes	yes	endocrine disruption and reproductive impairment

References: Primarily Grant and Ross 2002, but also Lindstrom et al. 1999; Hooper and MacDonald 2000; Kannan et al. 2001; Hall et al. 2003; Van deVijver et al. 2003; Rayne et al. 2004; Song et al. 2005.

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Table 2. Persistent organic pollutants that may pose a risk to Resident Killer Whales.

Pollutant	Use/Source	Persistent	Bio-accumulate	Risk
DDT (Dichlorodi-phenyl trichloroethane	pesticide used in some countries, banned in North America, persists in terrestrial runoff >30 years post ban, enters atmosphere from areas where still in use	yes	yes	reproductive impairment, immunosuppression, adrenal and thyroid effects
PCBs (Polychlorinated Biphenyls)	electrical transformer and capacitor fluid, limited use in North America but enters environment from runoff, spills, and incineration	yes	yes	reproductive impairment, skeletal abnormalities, immunotoxicity, and endocrine disruption
Dioxins and Furans	by-product of chlorine bleaching, wood product processing and incomplete combustion. Mills less of a source now. Current sources include burning of salt-laden wood, municipal incinerators, and residential wood and wood waste combustion; in runoff from sewage sludge, wood treatment	yes	yes	thymus and liver damage, birth defects, reproductive impairment, endocrine disruption, immunotoxicity, and cancer
PAHs (Persistent Polycyclic aromatic hydrocarbons)	by-product of fuel combustion, aluminium smelting, wood treatment, oil spills, metallurgical and coking plants, pulp and paper mills	yes	no	carcinogenic
flame retardants, esp. PBBs and PBDEs (Polybrominated diphenyl ethers)	flame retardants; in electrical components and backings of televisions and computers, in textiles and vehicle seats, ubiquitous in environment. 2/3 product PBDEs banned in Europe. Same two products withdrawn from North American marketplace in 2005, but one (deca) product still used globally.	yes	yes	endocrine disruption, impairs liver and thyroid
PFOs (Perfluro-octane sulfonate)	stain, water and oil repellent (included in Scotchgard until recently), fire fighting foam, fire retardants, insecticides and refrigerants, ubiquitous in environment	yes	yes but in blood, liver, kidney and muscle	promotes tumour growth
TBT, DBT (Tributyltin Dibutyltin)	antifoulant pesticide used on vessels	yes	yes	unknown but recently associated with hearing loss
PCPs (Polychlorinated paraffins)	flame retardants, plasticizers, paints, sealants and additives in lubricating oils	yes	yes	endocrine disruption
PCNs (Polychlorinated napthalenes)	ship insulation, electrical wires and capacitors, engine oil additive, municipal waste incineration and chlor-alkali plants, contaminant in PCBs	yes	yes	endocrine disruption
APEs (Alkyl-phenol ethoxylates)	detergents, shampoos, paints, pesticides, plastics, pulp and paper mills, textile industry found in sewage effluent and sediments	moderate	moderate	endocrine disruption
PCTs (Polychlorinated terphenyls)	fire retardants, plasticizers, lubricants, inks and sealants, enters environment in runoff	yes	yes	endocrine disruption and reproductive impairment

References: Primarily Grant and Ross 2002, but also Lindstrom et al. 1999; Hooper and MacDonald 2000; Kannan et al. 2001; Hall et al. 2003; Van deVijver et al. 2003; Rayne et al. 2004; Song et al. 2005.

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Polybrominated diphenylethers (PBDEs)

Preliminary evidence suggests that flame retardants may be a significant and emerging concern for Resident Killer Whales (Ross 2006). Moderate levels of PBDEs were observed in 39 biopsy samples collected between 1993-1996 from Southern Resident and Transient Killer Whales, and relatively low levels were observed in Northern Residents (Rayne et al. 2004). Based on analysis of blubber samples from Harbour Seals in Puget Sound, concentrations of PBDEs doubled every 3.1 years between 1984 and 2003, but appeared to decline in 2009 (Ross et al. 2013). Regulations prohibiting the manufacture of all PBDEs in Canada came into effect in July 2009. Additionally, PBDEs have been added to the Prohibition of Toxic Substances Regulations, which prohibits all PBDEs unless present in a manufactured article. Although the toxicity of PBDEs is not well understood, they have been associated with endocrine disruption in laboratory animals (Darnerud 2003). While no conclusive link could be established as a result of the numerous other lipophilic contaminants present, PBDE concentrations were negatively associated with thyroid hormones in Grey Seals (*Halichoerus grypus*, Hall et al. 2003). See Ross et al. (2009) for a review of research documenting some of the sources and properties, as well as the persistence and toxicity of PBDEs.

Numerous captive and semi-field studies of pinnipeds have provided evidence that POPs affect immune function (hence, resistance to disease), hormone levels, and reproductive health (Reijnders 1986; De Swart et al. 1996; Ross 2000; Nyman et al. 2003). Using this weight of evidence as a foundation, it is not possible to ignore the substantial risks that PCBs and other POPs present to Killer Whales in the northeast Pacific. Transient Killer Whales from Prince William Sound, Alaska (AT1 population) are highly contaminated, and have had no successful reproduction since 1984, providing perhaps a population-level glimpse into the effects of high POP burdens (Ylitalo 2001). High levels of toxic chemicals may also make Killer Whales more vulnerable to disease (Ross 2002). Jepson et al. (1999) found that Harbour Porpoises that died from infectious diseases had two to three times higher concentrations of PCBs than those that died from trauma.

Biological pollutants

Biological pollution may also threaten the health of Resident Killer Whales, their habitat and their prey. These pollutants may take the form of 'spill-over' pathogens from human activities (e.g. pets, livestock, migrations, habitat change), virulent, antibiotic- resistant bacterial strains arising as a result of the use of antibiotics or exotic species. Emerging infectious diseases are a growing concern for marine life, as naturally occurring host-pathogen relationships are altered through human activities such as disturbance, over-fishing, habitat destruction, climate change, or pollution (Ross 2002). Killer Whales whose immune system is compromised through chemical contaminants may be increasingly vulnerable to biological pollutants. Although no disease-related mass mortalities have been observed among BC's marine mammals, *Morbillivirus* has been detected in marine-dwelling River Otters (Mos et al. 2003), highlighting the potential risk of this or related pathogens to Killer Whales. In other areas, *Morbillivirus* outbreaks have caused mass mortalities of seals (Grachev et al. 1989; Kennedy et al. 2000) and dolphins (Aguilar and Borrell 1994). Pathogens such as *Morbillivirus* are capable of spreading extremely quickly (3,000 km/year), likely because in the marine environment there are few barriers to dispersal (McCallum et al. 2003).

The introduction of exotic species has changed habitats in other areas (e.g. Zebra Mussels in the Great Lakes, Eurasian Milfoil into freshwater lakes) and introduced species have the potential to impact local ecosystems here. In BC, Atlantic Salmon that have escaped from

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aquaculture operations have successfully spawned in freshwater (Volpe et al. 2000). The extent to which this is occurring and how Atlantic Salmon would compete with Pacific salmon, the preferred prey of Residents (Ford et al. 1998), is not well known at this time.

Trace metals

Trace metals occur naturally in the marine environment, but elevated concentrations sufficient to be a concern to marine mammals may be found in localized areas such as urban and industrial centres (Grant and Ross 2002). Some, such as cadmium, mercury, copper and lead may have toxic effects even at relatively low concentrations, and could impact Killer Whales, although effects on their prey and/ or habitat are more likely.

Little information is available on the levels and effects of trace metals on marine mammals in the Pacific. However, in a small sample of stranded Killer Whales, Residents showed higher levels of mercury than Transients (Langelier et al. 1990). In the western Pacific, all odontocete meat sampled from Japanese markets contained amounts of mercury that exceeded the level permitted for human consumption (Endo et al. 2003). However, the historical exposure of high trophic level marine mammals to naturally elevated concentrations of mercury in prey has resulted in their evolved ability to detoxify this toxic metal through the formation of mercury-selenium crystals in the liver (Martoja and Berry 1980).

Sources of contaminants

Monitoring the sources and levels of environmental contaminants is particularly challenging given that each year, up to 1,000 new chemicals are released into the environment globally (Haggarty et al. 2003). The high contaminant levels found in Southern Residents may arise from consuming prey that are from industrialized areas near the BC-Washington border, which are more contaminated than the prey of Northern Residents (Ross et al. 2000; Cullon et al. 2009). In Japan, odontocetes that travelled in more industrialized areas carried higher contaminant loads than those found in more remote areas (Endo et al. 2003). In a study of Harbour Seals in BC and Washington, Ross et al. (2004) found that although PCB levels were a concern in all areas, seals from Puget Sound were seven times more PCB-contaminated than were seals from the Strait of Georgia. This suggests that the food web within Puget Sound has been contaminated with PCBs, such that Killer Whales consuming prey items from this region may be vulnerable to increased contaminant exposure. Chinook Salmon, one of the Resident Killer Whales' preferred prey species (Ford et al. 1998; Ford and Ellis 2005), feed in the upper trophic levels in the food web, and those from Puget Sound are relatively contaminated with PCBs (O'Neill et al. 1998; Cullon et al. 2009). Studies suggest that most salmonids are 'importing' contaminants from their time at sea, reflecting global environmental contamination (O'Neill et al. 1998; Ewald et al. 1998).

Although DDT was banned in Canada in 1989 and over 40 years ago in the United States, it continues to enter the ocean from terrestrial runoff (Hartwell 2004) as well as from atmospheric transport from countries where it is still in use. Dioxins (PCDDs) and furans (PCDFs) represent highly toxic by-products of chlorine bleaching and associated wood treatment, and incomplete combustion. Source controls and regulations have greatly reduced their input in to the coastal environments of BC and Washington.

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Contaminants enter the marine environment from local, regional and international sources. These are discussed in detail in Haggarty et al. (2003). Local point sources of contaminants into the marine environment include:

- pulp and paper mills
- wood treatment facilities
- municipal effluent outfalls
- petrochemical facilities and
- mines

Indirect sources (non-point source pollutants) include:

- sewer overflows (e.g. organic wastes, household products, pharmaceuticals and personal care products)
- urban runoff and storm-water drainage (e.g. pesticides, metals, hydrocarbons, herbicides and animal wastes)
- agriculture (e.g. pesticides, herbicides, animal wastes and antibiotics)
- forestry (e.g. pesticides, herbicides, fire-control chemicals, anti-sapstain chemicals, log booms and storage areas) and
- aquaculture (e.g. organic wastes, chemical contaminants [antibiotics, feed additives, pharmaceuticals, pesticides and antifouling on nets])

Garrett and Ross (2010) describe the Canadian and U.S. federal, provincial and state agencies responsible for the monitoring, mitigation and regulation of environmental contaminants and their sources.

Shipping also represents a risk to the ecological integrity of coastal regions. Both intentional and unintentional discharge of chemicals and biological waste are added sources of pollution in all coastal areas, but particularly in high traffic zones. In addition, the introduction of exotic and invasive species carried on ship hulls and in ballast water have the potential to dramatically alter the habitats they have colonized (e.g. European Green Crabs, Zebra Mussels, the alga *Caulerpa taxifola*). Numerous invasive invertebrates have been found in the ballast water of ships at anchor in Vancouver Harbour (Levings et al. 2004), although the ecological significance of such introductions is unclear.

In addition, some pollutants such as PCBs, DDT and other chemicals are transported through atmospheric processes and ocean currents, and may travel to the west coast of North America from as far away as Asia in less than 5-8 days (Wilkening et al. 2000). Consequently, the northeastern Pacific may be a sink for globally produced POPs (Ross et al. 2000; 2004; 2006).

Certain 'legacy' POPs such as PCBs and DDT have been phased out of industrialized countries and their concentrations are slowly decreasing in the marine environment (Muir et al. 1999), although these declines have levelled off (Addison and Stobo 2001). However, levels of other 'new' POPs such as deca-PBDEs continue to increase globally, and represent the PCBs of the future (Ross 2006; Law et al. 2014). Unlike PCBs, which were generally used in a limited range of applications such as electrical transformers and capacitors, PBDEs have been widely used in many industrial and consumer applications and are incorporated into plastics, textiles and foam.

4.2.2. Reduced prey availability

Answering the question as to whether Killer Whales may be prey limited is complex. While the year-round diet of Resident Killer Whales is not well known, at certain times of the year salmon,

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particularly Chinook and Chum, are known to be important prey (see section 3.4.1. Diet). Ford et al. (2005) found that trends in the mortality rates of Southern and Northern Resident Killer Whales were correlated with each other, and that both were strongly related to fluctuations in the abundance of Chinook Salmon, but not Chum Salmon. Birth rates were also correlated with Chinook Salmon abundance, but more weakly than mortalities.

Less is known about the prey of Resident Killer Whales and their distribution and abundance during the months of November to April. This is due to the inherent challenges of studying whales during the winter months, and because the whales move from inshore areas where they are more concentrated during summer and range widely along the coast during the winter and early spring. Thus when considering the availability of prey to Resident Killer Whales, it should be noted that we have limited knowledge of what other prey species may be important to them, and the discussion below focuses on species that are known to be important.

Changes in salmon abundance and availability

Assessing the status of salmon stocks and their availability to Resident Killer Whales is challenging to interpret and often fraught with controversy. Until the middle of the 20th century, many wild salmon stocks experienced significant declines due to overfishing, habitat degradation, restrictions in access to spawning grounds due to landslides, and changes in ocean productivity (summarized in Krahn et al. 2002 and Wiles 2004). The situation changed between 1975 and 1993, and the total abundance of North Pacific salmon doubled (Bigler et al. 1996) due to hatchery enhancement, changes in fisheries management practices and a favourable climatic regime (Bigler et al. 1996; Beamish et al. 1997). Since the early 1990s many of these stocks have declined in number and specific causes have not been identified. Some studies have questioned the role of enhancement (Beamish et al. 1997, and reviewed in Gardner et al. 2004) but other potential problems such as marine survival appear to be a factor. At present 28 of 52 different wild Pacific salmon stocks in the lower 48 states of the U.S. are considered at risk under the U.S. ESA (NOAA 2017). In southwestern BC by 1990, salmon from one-third of the spawning rivers had been lost or were seriously depleted (Riddell 1993). Recognizing that many salmon stocks are under threat, Fisheries and Oceans Canada announced a new Wild Salmon Policy (WSP) in December 2004 (DFO 2005), designed to restore and maintain healthy and diverse wild salmon populations and their habitat. Since 2005, DFO has used the WSP to guide its work toward restoring healthy salmon populations, and development of a detailed implementation plan for the WSP is underway. If these and other actions are successful, salmon may gradually become more available to Resident Killer Whales.

Resident Killer Whales tend to be found in high concentrations in specific areas during the period when salmon are returning to rivers to spawn. This likely reflects the fact that salmon are not as widely dispersed at this time as they are during the rest of their life cycle. There is a great deal of diversity in the timing of the spawning period for salmon. For example, the Upper Columbia River has a spring run and a summer/fall run of Chinook. These runs are considered distinct stocks because they do not interbreed. The spring run is Endangered under the ESA in the U.S., yet the summer/ fall run is not at risk (NOAA 2017). This illustrates the need to consider the timing of the spawning period of each salmon stock when assessing the availability of salmon for Killer Whales, in order to ensure an adequate year-round food supply. Chinook Salmon are longer lived than other salmon species and spawn at different ages (Healey 1991). It is likely that their year-round availability in nearshore waters is a key factor, along with body size and lipid content, in Chinook being the preferred salmonid prey of Resident Killer Whales (Ford and Ellis 2005).

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To address the scientific uncertainty regarding the impact of sea lice on salmon, and the relationship of this to Killer Whales, DFO and others are conducting scientific research to assess and protect the health of the wild Pink and Chum Salmon resource in the Broughton Archipelago.

Depressed Chinook stocks

Chinook Salmon, the principal prey of BC's Resident Killer Whales, is one of the least abundant species of salmon in BC (Riddell 2004). However, unlike other salmon, many populations of Chinook remain in nearshore waters during the ocean phase of their life cycle. As a result they are available on a more year-round basis to Killer Whales, but are also more vulnerable to pollution (discussed in section 4.2.1 Environmental contaminants).

Chinook abundance dropped in the 1970s and 1980s, but escapements increased until the early 1990s in some rivers, primarily due to hatchery production (Beamish et al. 1997). In Washington, hatchery fish now account for about 75% of all harvested Chinook (Mahnken et al. 1998 in Wiles 2004). In un-enhanced river systems in central and northern BC, Chinook numbers remain depressed (Riddell 2004) and nine of 17 Chinook stocks in Washington, Oregon and California are listed under the ESA (NOAA 2017). It is likely that Chinook is an important limiting factor in the population dynamics of Resident Killer Whales (Ford et al. 2005; Ward et al. 2009; Ford et al. 2010). This may explain why Southern Resident Killer Whales have appeared in places as distant as off the Columbia River and northern California to the south and off southeastern Alaska in the north (Ford et al. 2017). Their presence was associated with unusually large returns of Chinook Salmon, which they may have had to seek out because of less abundant prey within their traditional range. When prey availability is reduced, Killer Whales may be forced to spend more time and travel greater distances to forage for their food, or switch to less profitable prey, which could lead to lower reproductive rates and higher mortality rates.

In addition to reduced Chinook abundance, the quality of individual fish appears also to have declined over recent decades. Average weights of Chinook Salmon in nine populations from BC to California declined by up to 45% between 1975 and 1993 (Bigler et al. 1996). Thus, the nutritional yield of each Chinook Salmon may be significantly less today than it was in past years, which may have an impact on the overall foraging energetics of Resident Killer Whales.

4.2.3. Disturbance

All cetaceans, including Resident Killer Whales, are being subjected to increasing amounts of disturbance from vessels, aircraft, and anthropogenic noise (IWC 2004). Both private and commercial vessel traffic have increased dramatically in recent years, and Killer Whales must navigate in increasingly busy waters (Osborne 1999; Foote et al. 2004). Industrial activities such as dredging, drilling, construction, seismic testing and military sonar, and other vessel use of low and mid-frequency sonars also impact the acoustic environment (Richardson et al. 1995; NRC 2003). The means by which physical and/or acoustic disturbance can affect Resident Killer Whales at both the individual and population level are not well understood, but may depend on whether the disturbance is chronic (such as whale watching) or acute (such as seismic surveys). Other factors, including the animal's condition, previous exposure (potentially causing sensitization or habituation), age, sex, and behavioural state also influence how disturbance affects whales (e.g. Williams et al. 2014). In addition, environmental factors, such as El Niño events that may change the availability of prey, may make animals more vulnerable to disruption than they would be otherwise. The sources of both physical and acoustic disturbance and their potential impact on Resident Killer Whales are discussed in greater detail below.

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A current challenge in studying the effects of disturbance is in finding informative ways to describe and measure them, and to date the question of whether a source of disturbance is likely to result in effects at the population level can be difficult to answer. Responses to disturbance may range from slight differences in surfacing and breathing rates to active avoidance of an area. Even if the disturbance causes immediate death, carcasses are rarely recovered (regardless of the cause of death, only 6% of Killer Whale carcasses are recovered, DFO-CRP unpublished data). As well, animals may show no obvious behavioural responses to disturbance, yet still be negatively affected. For example, Todd et al. (1996) found that Humpback Whales remained in the vicinity of underwater explosions, and showed no obvious behavioural responses to them. However they experienced significantly higher entanglement rates during this time, and necropsies of two whales that drowned in nets revealed acoustic trauma (Ketten et al. 1993). Thus a lack of a measurable behavioural response to a stimulus does not necessarily imply the disturbance does not have negative consequences. A parallel may exist with humans, since people exposed to chronic noise lose their hearing more quickly than those that are not exposed to chronic noise. The consequences of hearing loss for cetaceans are likely fatal.

Measures for changes in behaviour may also not be subtle enough to detect disturbance. Whitehead (2003) re-analyzed data that were reported to indicate that Sperm Whales did not show behavioural responses to surveys using high-intensity sound. He segregated the responses according to whale density in the area and found that contrary to earlier conclusions, when whale density was low, Sperm Whales avoided seismic activity. When densities were high, whales remained in the vicinity. He suggested that whales may have been reluctant to leave a rich feeding area despite the disturbance.

Whale watching

Commercial whale watching has grown dramatically in BC, with just a few boats carrying less than 1,000 passengers per year in the late 1970s and early 1980s to 80 boats carrying half a million passengers per year in 1998 (Osborne 1991; Baird 2002; Osborne et al. 2003). In 2015, there were 93 active commercial whale watching vessels in the Salish Sea alone (Seely et al. 2017). Whale watchers tend to focus on Resident Killer Whales in their most predictable locations, Haro Strait and Johnstone Strait. Vessels in the vicinity of whales include privately owned kayaks, sailboats and powerboats as well as commercial whale watch vessels. While the benefits of public education and increased awareness that can be achieved through guided whale watching are well established, concern over the effects of whale watching on Killer Whales has grown with the industry itself. This concern has prompted the development of industry initiated viewing guidelines and has resulted in studies that have attempted to measure responses of the whales to such focused attention (e.g. Kruse 1991; Williams et al. 2002a; b; Williams et al. 2014), as well as the behaviour of boaters around whales (e.g. Jelinski et al. 2002). Whale watching activities have the potential to disturb marine mammals through both the physical presence and activity of boats, as well as the increased underwater noise levels boat engines generate.

Under the Fisheries Act in Canada and the MMPA in the U.S., disturbance (harassment) of marine mammals, including Killer Whales, is prohibited. No special provisions or exemptions to this prohibition have been made for commercial whale watch operators and the commercial fleet is subject to the same regulatory restrictions as recreational boaters. Voluntary guidelines for

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viewing marine wildlife[3] were developed by DFO, the National Marine Fisheries Service (NMFS), and collaborators in 2002 to protect marine mammals, including Resident Killer Whales, from disturbance. These guidelines are reviewed and revised periodically. Additionally, industry associations, including the Pacific Whale Watch Association (PWWA) and the North Island Marine Mammal Stewardship Association (NIMMSA) have developed codes of conduct for marine mammal viewing by member businesses (NIMMSA 2016; PWWA 2017).

In 2011, the U.S. National Oceanic and Atmospheric Administration (NOAA) adopted federal vessel regulations to prohibit vessels from approaching Killer Whales within 200 yards (183 metres) and from parking in the path within 400 yards (366 metres) of Killer Whales. These regulations apply to all vessels in inland waters of Washington State, with exemptions for vessels that are actively engaged in commercial or First Nations fisheries, for research vessels under permit, ships in shipping lanes and government vessels in the course of official duties. Proposed amendments to the Canadian Marine Mammal Regulations under the Fisheries Act include minimum approach distances for all marine mammals as well as several other provisions aimed at reducing the risk of disturbance to marine mammals.

There are several projects that focus on educating the boating public both on and off the water about appropriate conduct in the vicinity of marine mammals. They also monitor vessel activity in the presence of whales. Current projects include the Soundwatch Boater Education Program in the San Juan Islands; Straitwatch in adjoining Canadian waters (Haro and Juan de Fuca Straits), Johnstone Strait, and occasionally off the west coast of Vancouver Island; and the Robson Bight Marine Warden Program in Johnstone Strait, while past projects include the Marine Mammal Monitoring Project in Victoria, BC. All of these programs are run by non-profit organizations that do not have guaranteed funding. Smith and Bain (2002) found that commercial operators increased their compliance with a voluntary 0.4 km 'no boat' zone in the San Juan Islands from less than 80% to over 90% when Soundwatch was present on the water.

Boat activity has been linked to short-term behavioural changes in Resident Killer Whales (Kruse 1991; Smith and Bain 2002; Williams et al. 2002a; 2002b). They have been known to swim faster, travel in less predictable paths, alter dive lengths, move into open water, and alter normal behaviour patterns at the surface in response to vessel presence (Kruse 1991; Williams et al. 2002a; 2002b). Foote et al. (2004) found that Southern Resident Killer Whales significantly increased the duration of their calls when boats were present, and suggested that this was an adaptation to the masking effects caused by increased noise levels. Additionally, Holt et al. (2009) found that Killer Whales increased the amplitude of their calls in response to increased vessel noise.

Although studies have shown short-term responses of Killer Whales to whale watching vessels, the long-term effects of whale watching on the health of Killer Whale populations are not known (Trites et al. 2002). Increased whale watching operations between the mid-1980s and 2001 may have resulted in a potential 20% increase in energetic expenditures of Killer Whales due to increased swimming velocity (Kriete 1995; 2002). Bain (2002) found that although the decline of Southern Residents followed the increase in commercial whale watching, the relationship was much more complex. He suggested that other variables, such as changes in the availability of prey, were also likely significant. Whether whale watching is a significant threat to Killer Whales or not, both the Northern and Southern Resident populations continue to return to their

[3] Be Whale Wise Guidelines for marine wildlife viewing are available at: http://www.bewhalewise.org/marine-wildlife-guidelines/

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traditional summer ranges despite increased whale watching activity. This may reflect their strong cultural behaviours or the distribution of their prey.

Underwater noise

At the time the COSEWIC status report on Killer Whales was written (Baird 2001), relatively little was known about the effects of underwater noise on marine mammals. Previous research had focused primarily on powerful noise sources with the potential to cause immediate injury or death, rather than chronic lower level noise sources (Richardson et al. 1995). Since then, there has been a rapidly growing awareness that noise is a significant threat that degrades habitat and adversely affects marine life (IUCN 2004; IWC 2004). It is estimated that ambient (background) underwater noise levels have increased an average of 15 dB in the past 50 years throughout the world's oceans (NRC 2003).

Killer Whales have evolved in the underwater darkness using sound much the way terrestrial animals use vision: to detect prey, to communicate and to acquire information about their environment. Anthropogenic noise can interfere with all these activities in critically important ways, such as disrupting communication, reducing the distance over which social groups can detect each other, masking echolocation and hence reducing the distance over which the animals can detect their prey, potentially displacing them from preferred feeding habitats, displacing prey, impairing hearing, either temporarily or permanently and in extreme cases causing death (Bain and Dahlheim 1994; Barrett-Lennard et al. 1996; Bain 2002; Erbe 2002; NRC 2003; Au et al. 2004).

The challenges of using and interpreting behavioural responses of marine mammals to noise as a measure of disturbance are discussed above. Opportunities to measure physiological responses to anthropogenic noise are much rarer, but provide insight into the mechanisms by which noise could impact animals at the individual, and potentially population level. Physiological responses to anthropogenic noise that have been measured in marine mammals include both temporary and permanent hearing threshold shifts, the production of stress hormones and tissue damage, likely due to air bubble formation or as a result of resonance phenomena (Ketten et al. 1993; Crum and Mao 1996; Evans and England 2001; Finneran 2003; Jepson et al. 2003; Fernandez et al. 2004). Marine mammals, including Killer Whales, may be particularly vulnerable to resonance because of the air-filled cavities in their sinuses and middle ear, their lungs and small gas bubbles in their bowels. While the mechanism by which high-intensity sound can cause lethal and sub-lethal effects on cetaceans is not completely understood (Fernandez et al. 2004; Piantadosi and Thalmann 2004), loud anthropogenic sources of noise, particularly low and mid-frequency military sonars, have been implicated in mass stranding and mortality events around the world, and the subject urgently merits further study. Animals already affected by anthropogenic stressors such as environmental contaminants may be particularly vulnerable to additional stresses such as noise (Sih et al. 2004).

Sounds travel as waves much more quickly through water than air (1,530 vs. 340 m/s). The perceptual features of sound, "pitch" and "loudness," have physical analogues. How high or low-pitched a sound is can be described in terms of its frequency, and is measured in hertz (Hz). Human hearing ranges from approximately 20 to 20,000 Hz (20 kHz), and is best between 600 and 2,000 Hz. The peak hearing sensitivity of Killer Whales is at approximately 20 kHz, although they show behavioural responses to sound from 75 Hz to over 100 kHz (Hall and Johnson 1972; Syzmanski et al. 1999). Killer Whale calls contain energy throughout this frequency range, and many echolocation clicks are centered at 20 kHz.

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The 'loudness' of a sound is described in terms of its pressure. For the purposes of consistency, the units of measure used here are dB_{RMS} re 1 μPa. By convention, noise sources are compared in terms of their "source levels" by estimating the level that would be measured at 1 m from the underwater sound source. In general, the further away from a sound source, the quieter the received sound level, although physical and oceanographic features of the marine environment can affect how quickly a sound attenuates (gets quieter). High frequency sounds attenuate much more rapidly than low frequency sounds under uniform conditions in the open ocean, but a number of factors influence sound propagation and high frequencies may propagate further than low frequencies in shallow water or places with complex bottom terrain. Temperature, salinity, depth, bottom topography and other physical factors must all be taken into account to accurately predict the intensity of sound reaching a whale.

The characteristics of some underwater noise sources are briefly described in Table 2. It is important to consider the length of time that animals are exposed to sounds, and sound loudness and frequency. As well, some sounds are continuous, whereas others are pulses of sound that are generated intermittently. The frequency composition also varies, ranging from broadband sounds such as seismic surveys, to narrowband sounds such as military sonar that are only broadcast across a limited range of frequencies.

Sounds at received levels of 120 dB typically disrupt the behaviour of 50% of exposed cetaceans (Richardson et al. 1995). Williams et al. (2002) found behavioural changes in Northern Residents at received levels estimated at about 105-110 dB. However, with increasing use of loud, low frequency noise in activities such as ocean acoustic tomography and low frequency active sonar, which are detectable at ranges of thousands of kilometres, there has been pressure to raise the threshold for regulatory intervention. In the United States, NMFS recently updated guidance on underwater acoustic threshold levels for avoiding permanent hearing threshold shifts (PTS) in marine mammals (NMFS 2016). This guidance expressed thresholds for hearing shifts for impulsive sounds in terms of both the cumulative sound exposure level and peak sound pressure level. Onset of PTS is considered to occur when either of the two metrics is exceeded. For cetaceans in the mid-frequency hearing group, including Killer Whales, the PTS acoustic thresholds (received levels) for impulsive sounds were identified as 230 dB for the peak sound pressure level and 185 dB for the cumulative sound exposure level. For non-impulsive sounds, the PTS onset acoustic threshold for mid-frequency cetaceans is 198 dB. It should be noted that these acoustic thresholds are just one tool for determining and mitigating the impacts of sound exposure on marine mammals. Behavioural impact thresholds and auditory masking assessments should also be considered (NMFS 2016).

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Table 3 Signal structure, frequency range and source levels of anthropogenic noise. Modified from Table 2-1b in NRC (2003) and Table 6.8 in Richardson et al. (1995).

Source	Signal Structure	Frequency Range	Source Level (dB re 1 μPa at 1 m)
Seismic surveys	impulsive	broadband >0 Hz to >100kHz	>240
Military Sonar surveillance tactical weapon/ counter weapon	 pulsed tones pulsed tones pulsed tones and wideband pulses	 <1kHz >1kHz to < 10kHZ >10kHz to 100kHz	 >230 200 to 235+ 190 to 220
Construction	broadband and tones	<10kHz to 10+kHz	NA
Dredging	broadband and tones	<10Hz to <10kHz	NA
Explosions	impulsive	broadband	>240
Commercial shipping	continuous	10Hz to >1kHz	160 to 200
Commercial sonars	pulsed tones	28kHz to >200kHz	160 to 210

Military sonar

Military active sonar is used in military operations for target detection, localization and classification (NRC 2003). Unlike passive sonar systems, which listen for sounds, active sonar units transmit pulses of tones at frequencies from <1 to >100 kHz and source levels of 200-235 (or more) dB re 1 μPa at 1 m depending on the application (Evans and England 2001). There is now a growing weight of evidence that these sources of underwater noise may pose a significant threat to cetaceans. Active military sonar has been associated with increased strandings of beaked whales and Humpback Whales (numerous incidents summarized in IWC 2004). In October 2004, the European Parliament called on its member nations to suspend the use of all high-intensity military sonar until further research can determine what effects it may have on marine life (European Parliament Resolution P6 TA, 2004).

For security reasons, information on the specifications of military active sonar is difficult to obtain, and much of what is available is based on U.S. Navy equipment. Given that the U.S. Navy engages in joint operations with the Canadian military in both the Strait of Georgia and off the west coast of Vancouver Island, and that both Northern and Southern Resident Killer Whales travel in U.S. waters, the threat that active sonar may pose must be considered and precautionary measures should be considered by both navies. Southern Resident Killer Whales may be especially vulnerable because they spend significant time in the waters of Washington State, where a large naval exercise area runs parallel to the coast.

Military active sonars may be categorized as: surveillance (low frequency, <1 kHz), tactical (mid frequency, 1 to 10 kHz), and weapon/counter weapon (high frequency, >10 - 100 kHz, see Table 2). Tactical sonars can have detection ranges of 10s of kms, and surveillance low frequency active sonars can be detected at ranges of 100s of kms (NRC 2003). The use of SURTASS (Surveillance Towed Active Sensor System) LFA (Low Frequency Active) sonar has been controversial because of concerns about its potential effects on marine life (EIS 2007).

The Canadian Department of National Defence's Research Agency (DRDC) conducted research to investigate low frequency active tactical sonar through the Towed Integrated Active Passive Sonar (TIAPS) off the Atlantic Coast (Bottomely and Theriault 2003). The maximum

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source level of the TIAPS system was 223 dB re 1μPa @ 1m (Theriault pers. comm. 2007). Mitigation measures were applied (see Bottomely and Theriault 2003 for details) and no incidents involving marine mammals were reported. There are no plans to acquire this particular sonar for Canadian military use, and present defence policy requires that any future acquisition and testing of sonar systems will include environmental considerations (Freeman pers. comm. 2007).

Mid-frequency tactical sonar systems operating at 1-10 kHz are used to detect mines and submarines. They have been associated with mass stranding events in the Bahamas, Canary Islands, Greece and the Gulf of California (IWC 2004). Mid-frequency sonar exercises conducted by the USS Shoup on May 5, 2003 in Haro Strait were reported to correspond with changes in behaviour in members of J pod that were foraging 47 km away at the time, and resulted in behaviour more extreme than observed in response to any other disturbance. The pod was observed trying to leave the area while the ship was 22 km away and ultimately pod members separated and left the area in different directions when the USS Shoup passed by at a range of 3 km (D. Bain, personal observation and personal communication; K.C. Balcomb, in Wiles 2004). Up to 100 Dall's Porpoises and a Minke Whale were also seen leaving the area at high speed. Extensive examination of the 11 concurrent Harbour Porpoise strandings found no definitive signs of acoustic trauma, but the cause of death could not be determined for six animals, and the possibility of acoustic trauma as a contributory factor in the deaths of the remaining five porpoises could not be ruled out (lesions consistent with both acoustic trauma and alternative explanations were observed; NMFS 2004). Further, all members of J pod were still alive more than two years after the incident.

The Canadian Navy has five principal types of military sonar emitters. The SQS 510 sonar is the primary mid-frequency sonar used for anti-submarine search and is the most powerful. It is currently fitted to six ships on the west coast. In comparison, the U.S. Navy's SQS 53C sonar, such as that used on the USS Shoup, emits ten times more energy than the Canadian 510 sonar. The Canadian Navy also uses helicopter dipping sonars and active sonobuoys, though these emit far less energy than the 510 (D. Freeman, Department of National Defence, pers. comm. 2007).

The Canadian Navy uses active sonar during training exercises and equipment testing in designated training areas. However, sonar operations may also take place in other waters along the Pacific coast. To mitigate the potential impacts of sonar use, Department of National Defence (DND) ship personnel receive training in marine mammal identification and detection. The current Maritime Command Order 46-13 for marine mammal mitigation is to avoid transmission of sonar any time a marine mammal is observed within the defined mitigation avoidance zone specific to each type of sonar. These zones were determined using the interim NMFS thresholds for potential behavioural disturbance (160 dB) and physical injury (180 dB) (Freeman pers. comm. 2007). Concerns remain that some impacts may occur beyond the visible horizon, and these will be difficult or impossible to observe or mitigate.

Canadian test ranges are also used by other navies to test equipment and train personnel. They follow Canadian procedures for use of these ranges, which includes marine mammal impact assessment and mitigation (Freeman pers. comm. 2005). When conducting joint exercises in Canadian waters, other navies are provided direction including sonar mitigation protocols, prior to and during exercises. As little is known about the offshore distribution of Resident Killer Whales, especially during the winter months, they may be vulnerable to the use of sonar in the offshore ranges.

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Seismic surveys

Airguns are used in geophysical surveys and to detect and monitor earthquake faults and other structures such as oil and gas deposits beneath the sea floor. The following information on the characteristics of seismic surveys comes from NRC (2003) unless mentioned otherwise. Like military sonar, seismic surveys generate high intensity sounds. Most of their energy is concentrated at frequencies between 5-300 Hz and maximum pressure levels of 260 dB re 1μPa at 1 m. However, unlike military sonars, airgun arrays used for seismic surveys generate broadband noise that extends to over 100 kHz (Calambokidis et al. 1998).

Current survey methods use one or more airguns that are towed behind a ship. Airgun arrays range in size from 2,000-8,000 cu in, depending on the application. The pulses of noise fired from these guns penetrate the seafloor surface for distances of up to 10 km deep. The arrays are towed at approximately 2.6 m/s (5 knots) and the airguns are fired every 10-12 seconds. The question of whether Killer Whales could sustain swimming the long distance necessary to avoid these sound sources needs to be addressed. Seismic surveys using powerful airgun arrays have been detected at distances of over 3,000 km from their source (Niekurk et al. 2004).

DFO receives occasional applications for permits for geophysical surveys from industry, government agencies such as Natural Resources Canada, and from universities. Currently, however, a moratorium on offshore oil and gas exploration in BC remains in place. As awareness is growing on the potential threats of high intensity sound on marine life (IUCN 2004; IWC 2004), the potential impacts of broadband high energy noise on Killer Whales must be considered. DFO has developed the Statement of Canadian Practice with respect to the Mitigation of Seismic Sound in the Marine Environment, which is reviewed annually to allow for revisions to reflect new technologies, scientific findings, and industry practices (DFO 2016a). In the Pacific Region, each proposed seismic survey is reviewed and case by case mitigation measures are developed based on the species of concern in the area of the survey.

Systematic observations of cetaceans during seismic surveys have been carried out in UK waters, and have shown that Killer Whales and other cetaceans were generally seen further away during periods when airgun arrays were firing (Stone 2003). Behavioural studies in other areas have shown mixed responses to seismic surveys. Grey and Bowhead Whales appeared to avoid seismic surveys (Malme and Miles 1987; Ljungblad et al. 1988; Myrberg 1990). Male Sperm Whales and feeding Humpback Whales did not avoid seismic surveys (Malme et al. 1985; Madsen et al. 2002). A seismic survey in Puget Sound showed mixed results between species, with some, such as Grey Whales, exhibiting ambiguous responses to the survey while others, such as Harbour Porpoises, tolerating only relatively low exposure levels before leaving the area (Calambokidis et al. 1998).

For obvious ethical reasons, there are no experimental studies of the physical effects of seismic surveys on cetaceans. However the internal structure of the cetacean ear resembles that of both fish and terrestrial mammals (Fay and Popper 2000). A small (20 cu in) airgun has been shown to cause permanent hearing loss in caged fish (McCauley et al. 2003), so it is possible that airguns may be capable of damaging cetacean ears if the whales cannot avoid the sound source. Since Killer Whales are known to be exquisitely dependent on sound for orientation, navigation, locating and catching food, communication, and social interactions, the consequences of severe hearing loss could be fatal.

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Commercial sonar

Commercial sonar systems are used in a wide variety of vessels for fishing, navigation (depth sounders), bottom-mapping and detecting obstacles (e.g. side scan sonars). They are generally standard equipment on any vessel over 5 m. These sonars typically generate narrowband sounds at higher frequencies and lower power than military sonars. High frequency sounds are more easily focused into narrow beams and attenuate more quickly than low frequency sounds. Thus the volume of water they influence is smaller. There are many models of commercial sonars, but it is only the units that operate below 100 kHz, the upper limit of Killer Whale hearing, that are of concern. Whales may be able to avoid these sources of sound when boats are widely dispersed, but when boats are concentrated in high traffic areas Killer Whales may have no choice but to travel through heavily ensonified areas.

Shipping

Commercial shipping has increased dramatically in recent years. For example, between 1995 and 1999 the worldwide commercial shipping fleet increased 12% (NRC 2003). There are few studies that have measured changes in the background underwater noise levels over time, but those that have suggest that increased vessel traffic is responsible for the increase in ambient noise over the last 100 years (e.g. Andrew et al. 2002). In the northern hemisphere, shipping noise is the dominant source of ambient noise between 10 to 200 Hz (NRC 2003). While shipping energy is concentrated at low frequencies, ships produce significant amounts of high frequency noise as well. Studies are currently underway to understand and mitigate the impacts of shipping activities and commercial vessel traffic noise on some marine mammal species at risk. For example, in 2017, the Enhancing Cetacean Habitat and Observation (ECHO) initiative led by the Vancouver Fraser Port Authority coordinated a vessel slowdown trial in Haro Strait to better understand and measure the level of noise reduction that can be achieved through reduced vessel speed.

Permitted close approaches

Certain activities have the potential to disturb and/or injure whales because they require physical contact with whales or close approaches by boats for extended periods of time. As a result, in both Canada and the U.S., researchers and filmmakers must obtain federal permits if their projects require close approaches or physical contact with Killer Whales. Close approaches can disturb whales both physically and acoustically. Much of the research on Killer Whales is conducted using boats ranging in size from a few metres to vessels over 30 m, although some is land-based (e.g. Orcalab on Hanson Island, the Robson Bight Marine Warden Program on West Cracroft Island, Johnstone Strait). A boat at 10 m from a whale will be approximately 20 dB louder than a boat at 100 m based on spherical spreading (Richardson et al. 1995).

Photo-identification studies require that all whales in the group be photographed before the encounter is considered complete, and good quality photographs typically mean that whales must be approached to within 30 m (approximately 10 dB louder than at 100 m). Prey fragment sampling, which is providing insight into the diet of Resident Killer Whales, involves approaching the area where a whale has surfaced after it has finished actively feeding. Biopsy darting, a method used in genetic and contaminant studies, also involves close approaches by boats, and recommendations arising from the NOAA Cetacean Systematics Workshop in La Jolla California, in April-May 2004 include darting juveniles (Waples and Clapham 2004). The possible health risks of darting young calves have not been evaluated.

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Some satellite tags and time-depth recorders (TDRs) are applied externally to Killer Whales. They are used to monitor the movements of whales, but may disturb them during the initial application and /or during the time that they adhere to the skin. Newer technologies involving satellite tags and TDRs that are implanted in the skin or muscle pose the additional risk of injuring Killer Whales. From 2013 to 2016, NOAA used satellite tags that attach to Killer Whales through darts that implant into the skin and tissue of these whales. The tags provided information about movements and habitat use of Southern Resident Killer Whales and were used to address knowledge gaps regarding winter distribution of this population. This tagging effort was suspended in April 2016 following the death of Southern Resident L95, after the cause of death was determined to be an infection that was likely introduced through the tag wound (NOAA 2016).

Other forms of disturbance

The number of boats on the water has increased dramatically in recent years. This increase in traffic has the potential to disrupt Killer Whales simply because more vessels are passing through their habitat and potentially disturbing how whales move through the available space. This is most evident when whales are interrupted from their normal activities in order to avoid a collision. While collisions between whales and vessels are relatively rare, when they do occur they can cause significant injury or death (Ford et al. 2000). A science based review of the effectiveness of recovery measures for Southern Resident Killer Whales conducted in 2017 identified vessel strikes as an emerging threat to this population and measures have been suggested to address this threat. Refer to the Review of the Effectiveness of Recovery Measures for Southern Resident Killer Whales (DFO 2017c) for further information.

Personal watercraft (PWC) or 'jet skis' may be another potential source of disturbance or injury to Killer Whales. PWC are capable of much more erratic or unpredictable manoeuvres than traditional high speed vessels. As a result they pose a collision risk to Killer Whales and other wildlife. PWC have been banned in the San Juan Islands and in portions of the Monterey Bay National Marine Sanctuary, but they are not banned in the coastal waters of BC, with the exception of the inner waters of Vancouver Harbour. Underwater noise emissions of PWC are reported to consist of broadband energy between 100 Hz and 10 kHz (Erbe 2013).

While Resident Killer Whales must travel in high vessel traffic areas such as Johnstone Strait and the Strait of Georgia, they also must negotiate both commercial and recreational sports fishing boats specifically targeting salmon in 'hot spots' that are also good feeding areas for Killer Whales. This includes areas in the vicinity of sports fishing lodges. Conflict for space may force Killer Whales to alter their foraging behaviour in order to successfully capture prey or to avoid collision or entanglement (see section 4.2.5).

Certain industrial activities such as construction, drilling, pile driving, pipe laying and dredging may also disrupt Killer Whales. Construction is also a source of underwater noise. Physical structures, including net pens for aquaculture and permanent structures (e.g. wharves), may damage foraging habitat such as kelp beds, or physically displace Resident Killer Whales from areas they have historically travelled in. If the finfish aquaculture industry continues to expand on the north coast, the placement of net pens may become an issue for Northern Residents.

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4.2.4. Oil spills

While the probability of either Northern or Southern Resident Killer Whales being exposed to a major oil spill is relatively low, the impact of such an event is potentially catastrophic. Both populations are at risk of exposure to an oil spill because of the large volume of tanker traffic that travels in and out of Puget Sound and the Strait of Georgia (Baird 2001; Grant and Ross 2002) and the proposed expansion of tanker traffic along the coast of BC. In 2003, 746 tankers and barges transported over 55 billion litres of oil and fuel through the Puget Sound (WDOE 2004). Though the moratorium on offshore oil and gas exploration and development remains in place in BC, if the moratorium is lifted, the extraction and transport of oil may put Resident Killer Whales at additional risk.

Killer Whales do not appear to avoid oil, as evidenced by the 1989 Exxon Valdez oil spill in Prince William Sound, Alaska. Less than a week after the spill, Resident Killer Whales from one pod were observed surfacing directly in the slick (Matkin et al. 1999). Seven whales from the pod were missing at this time, and within a year, 13 of them were dead. This rate of mortality was unprecedented, and there was strong spatial and temporal correlation between the spill and the deaths (Dahlheim and Matkin 1994; Matkin et al. 1999). The whales probably died from the inhalation of petroleum vapours (Matkin et al. 1999). Exposure to hydrocarbons can be through inhalation or ingestion and has been reported to cause behavioural changes, inflammation of mucous membranes, lung congestion, pneumonia, liver disorders, and neurological damage (Geraci and St. Aubin 1982).

4.2.5. Incidental mortality in fisheries

Killer Whales are rarely entangled in fishing gear, based on anecdotal accounts and an absence of net marks in identification photographs, but the actual numbers of whales caught are unknown (Baird 2001). Several stranded Killer Whales have been found with gear from commercial or recreational line fisheries in their stomachs and the possibility of mortality as a result is unknown (Ford et al. 1998). A few entanglements have been reported from BC, Alaska and California, but they usually have not resulted in death (Pike and MacAskie 1969; Barlow et al. 1994; Heyning et al. 1994; Guenther et al. 1995). In 2014, Northern Resident Killer Whale I103 became severely entangled in a gill net and despite being released quickly, died the following winter. It is likely that entanglement in fishing gear poses little direct threat to Killer Whale populations at present. However, there are areas in BC where Killer Whales have learned to take fish from fishing gear and once this behaviour is adopted, it can spread quickly throughout a population. This problem, referred to as depredation, is severe in many parts of the world (Donogue et al. 2002). Where depredation occurs, deterrent methods, entanglement and accidental hooking can increase the injury or mortality rates of whales.

5. Knowledge gaps

While Resident Killer Whales are among the best studied cetaceans in the world, significant gaps in knowledge about these populations remain. In part this is due to the fact that although studies of Killer Whales have been ongoing over the last 45 years, their whereabouts are poorly known during much of the year. As well, opportunities to learn from Killer Whale carcasses occur relatively infrequently. Only seven to eight carcasses are recovered around the world each year (Raverty et al. 2014). In a 30-year period, only 14 Resident carcasses were found and necropsied in BC (Ford et al. 1998), a recovery rate of 6%.

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Some key areas where further knowledge is needed include:

- the year-round distribution and behaviour of Resident Killer Whales
- whether potential additional critical habitat areas are required for Resident Killer Whales
- the historical abundance of Resident Killer Whales
- the year-round diet and energetic requirements of Resident Killer Whales
- the consequences of changes in key prey populations on Resident Killer Whales, as well as their historic trends
- the population level consequences of low population size and its effects on the sustainability and viability of Resident Killer Whales
- the population size that is needed to maintain the cultural and genetic diversity of Resident Killer Whales
- the long- and short-term effects of physical disturbance (shipping, whale watching, aircraft, researchers and film makers) on Resident Killer Whales
- the long- and short-term effects of acoustic disturbance (whale watching, seismic surveys, military sonar, researchers and film makers) on Resident Killer Whales
- the full range of anthropogenic environmental contaminants to which Killer Whales and their prey are exposed, over time and in space, with special attention paid to the identification of sources and the resulting effects of environmental contaminants on Resident Killer Whales, their prey and their habitat
- diseases, pathogens, parasites and pathologies of Resident Killer Whales
- the effects of climate or environmental change on Resident Killer Whale prey and their habitat

6. Recovery

6.1 Recovery goal

The recovery goal for Northern and Southern Resident Killer Whales is to: ensure the long-term viability of Resident Killer Whale populations by achieving and maintaining demographic conditions that preserve their reproductive potential, genetic variation, and cultural continuity.

The recovery goal reflects, to the extent possible, the complex social and mating behaviour of Resident Killer Whales and the key threats that may be responsible for their decline. In the absence of historical data, it does not identify a numerical target for recovery because our current understanding of Killer Whale population demographics is not adequate for setting a meaningful value at this time. However, because maintaining the demographic conditions that will preserve their reproductive potential, genetic variation, and cultural continuity is fundamental to these populations recovering, a number of demographic indicators are expressed herein that will serve as short-term measures of recovery success. The setting of a quantitative recovery goal will be revisited as new information becomes available.

Killer Whales are top-level predators, and as such will always be far less abundant than most other species in their environment. In addition, they are segregated into small populations that are closed to immigration and emigration, such as the Northern and Southern Resident communities. Furthermore, their capacity for population growth is limited by a suite of life history and social factors, including late onset of sexual maturity, small numbers of reproductive females and mature males, long calving intervals, and dependence on the cultural transmission of ecological and social information. Unfortunately, little is known concerning the historic sizes of

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Killer Whale populations, or the factors that ultimately regulate them. Genetic diversity is known to be low in both populations, particularly the Southern Residents, but the consequences of this lack of diversity have not been examined.

6.1.1. Measures of recovery success

The following have been identified as measures of recovery success:

a) long-term maintenance of a steady or increasing size for populations currently at known historic maximum levels and an increasing size for populations currently below known historic maximum levels
b) maintenance of sufficient numbers of females in the population to ensure that their combined reproductive potential is at replacement levels for populations at known historic maximum levels and above replacement levels for populations below known historic maximum levels
c) maintenance of sufficient numbers of males in the population to ensure that breeding females have access to multiple potential mates outside of their own and closely related matrilines
d) maintenance of matrilines comprised of multiple generations to ensure continuity in the transmission of cultural information affecting survival

6.1.2. Monitoring and research strategies

The following monitoring and research programs are essential to define and evaluate the success of the indicators of recovery and will be vital to the establishment of a quantitative recovery goal:

a) routinely monitor Resident Killer Whale population numbers, sex and age composition, social structure and genetic diversity
b) develop models of Resident Killer Whale population dynamics and demographics, including social and genetic structure
c) develop a quantitative framework to better understand how key anthropogenic and naturally occurring factors, particularly those identified as threats, affect the dynamics of Resident Killer Whale populations
d) undertake studies to identify the role of cultural transmission in the foraging ecology, sociobiology and maintenance of genetic diversity in Resident Killer Whales

Because Killer Whale populations are closed to immigration and emigration, and animals individually identifiable, routine monitoring provides accurate, detailed life history information, which is used to determine trends, and to refine and test population models. These models will lead to a better understanding of achievable targets for population recovery. A better understanding of the anthropogenic and naturally occurring factors that regulate or limit Killer Whale populations, and of the role and importance of culture, will make it possible to rank threat factors and prioritize recovery actions.

6.2 Recovery objectives and strategies to achieve recovery

Given our current knowledge, the primary anthropogenic threats to the long-term survival of Northern and Southern Resident Killer Whales appear to be 1) reduced prey availability, 2) environmental contaminants, 3) disturbance, and 4) degradation of critical habitat. We have

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identified four objectives that directly address these threats and contribute to achieving the recovery goal of population viability and sustaining genetic diversity and maintaining cultural continuity (as stated above). The numerical values do not reflect any priority among the objectives. These objectives provide direction for the broad strategies that can be used to specifically mitigate and/or eliminate each of the threats facing Resident Killer Whales, and to better address gaps in our knowledge.

6.2.1 Objective 1

> Ensure that Resident Killer Whales have an adequate and accessible food supply to allow recovery.

This objective identifies the need to learn more about the year-round diet of Killer Whales, and to understand and mitigate the threats to key prey populations and their habitat. Food supply can limit the growth and recovery of any population, and there are concerns about the quality and quantity of Resident Killer Whale prey, as well as the prey's habitat. In some areas of the U.S., for example, runs of Chinook Salmon, a principal prey species for Resident Killer Whales, have been listed as either Endangered or Threatened (NOAA 2017). We know very little about what Killer Whales eat during the winter and spring, and this information is critical to understanding whether the quantity or quality of their food supply could be responsible for the recent decline in Killer Whale numbers, and may prevent their populations from recovering.

Objective 1 strategies

- Determine the seasonal and annual diet and energetic requirements of Resident Killer Whales
- Identify key prey populations and feeding areas for Resident Killer Whales
- Establish long-term monitoring programs capable of detecting changes in the abundance, distribution and quality of Resident Killer Whale prey
- Protect the access of Resident Killer Whales to important feeding areas
- Ensure that Resident Killer Whale prey populations and their (the prey's) habitat are adequately protected from anthropogenic factors such as exploitation and degradation, including contamination, which will allow for the recovery of Resident Killer Whales

6.2.2 Objective 2

> Ensure that chemical and biological pollutants do not prevent the recovery of Resident Killer Whale populations.

Ross et al. (2000) showed that Southern Resident Killer Whales are among the most contaminated mammals known, and that Northern Residents also carry significant pollutant loads. These pollutants are known to impair both immune responses and reproduction in other species at lower concentrations than currently seen in Killer Whales. The strategies listed below are intended to improve our understanding of, and mitigate, the contaminant risks that Resident Killer Whales and their prey are exposed to. They also acknowledge the serious risks that pathogens, introduced species and catastrophic events such as oil spills present to Killer Whales and their prey.

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Objective 2 strategies

- Investigate the effects of chemical and biological pollutants on the health and reproductive capacity of Resident Killer Whales
- Monitor chemical and biological pollutant levels in Resident Killer Whales and their prey
- Identify (and prioritize) key chemical and biological contaminants and their sources
- Reduce the introduction into the environment of pesticides and other chemical compounds that have the potential to adversely affect the health of Killer Whales and/or their prey, through measures such as national and international agreements, education, regulation, and enforcement
- Mitigate the impacts of currently and historically used 'legacy' pollutants in the environment
- Investigate diseases, pathogens, parasites, and pathologies of Killer Whales
- Reduce the introduction of biological pollutants, including pathogens and exotic species, into the habitats of Killer Whales and their prey

In order for these strategies to be successful, it is important that contaminant levels be measured, so as to provide a baseline that can be used to monitor changes in contaminant profiles over time, and to quantify whether attempts at mitigation are successful. Mitigation must occur on scales that range from the local consumer to the international level, as many pollutants originate from sources outside of Canada. Regulations, guidelines and best practices for the manufacture, storage, transport, use and disposal of hazardous compounds must be followed, and evolve to reflect changing knowledge of contaminants and their adverse health effects on Resident Killer Whales, their prey and their habitat. Education at individual, corporate and government levels (again ranging from local to international) will play an important role in reducing the rate at which contaminants are introduced into the environment. International treaties, similar to the Stockholm Convention on Persistent Organic Pollutants, should be endorsed.

6.2.3 Objective 3

> Ensure that disturbance from human activities does not prevent the recovery of Resident Killer Whales.

Both physical and acoustic disturbance from human activities may be key factors causing depletion or preventing recovery of Resident Killer Whale populations. Sources of acoustic disturbance range from high-intensity sound produced by seismic surveys to chronic sources such as vessel traffic. During periods of high boating activity in the summer months, disturbance may occur from vessel congestion, impairing the ability of whales to move freely and/ or forage effectively. Physical disturbance can be caused by boat or air traffic close to whales, especially during certain behavioural states such as feeding or beach rubbing (Williams 1999). Research to date has identified various immediate responses of whales to disturbance; however, we know little about potential long-term effects on whale behaviour, health, and foraging efficiency. The National Research Council (NRC 2005) put forward a detailed listing of approaches to better understand how noise impacts marine mammals. The strategies listed here generally address the need for more knowledge about how noise and physical disturbance affect Resident Killer Whales and also provide for mitigation of disturbance as a precautionary measure.

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Objective 3 strategies

- Determine the short and long-term effects of chronic and immediate forms of disturbance, including vessels and noise, on the physiology, foraging, and social behaviour of Resident Killer Whales
- Determine baseline ambient and anthropogenic noise profiles and monitor sources and changes in the exposure of Resident Killer Whales to underwater noise
- Develop and implement regulations, guidelines, sanctuaries and other measures to reduce or eliminate physical and acoustic disturbance of Resident Killer Whales
- Develop protocols, regulations, guidelines and/or other measures for the use of underwater seismic survey tools and high energy sonar testing, as most appropriate and in collaboration with stakeholders, to reduce disturbance or injury to Resident Killer Whales, where such activities are permitted

In order to be effective, these strategies will require education and stewardship activities promoting compliance with best practice guidelines, the protection of sanctuaries, and the enforcement of regulations. New technologies, such as those that reduce noise may also contribute to reductions in disturbance over the long-term. Existing regulations, guidelines, protocols and other measures should be evaluated for their efficacy in protecting Resident Killer Whales, particularly as new information becomes available.

6.2.4 Objective 4

> Protect critical habitat for Resident Killer Whales and identify additional potential areas for critical habitat designation and protection.

Four areas, used consistently by Resident Killer Whales, are designated as critical habitat as defined by SARA. One, the trans-boundary waters of Haro Strait and Boundary Pass, is used by Southern Residents year-round. The second, the waters of Johnstone and southeastern Queen Charlotte Straits and their adjoining channels, is used by many of the Northern Residents during the summer and fall. The third, which includes waters off southwestern Vancouver Island, is used by members of both the Southern and Northern Resident Killer Whale populations throughout most of the year. The fourth, waters in western Dixon Entrance, is used by Northern Resident Killer Whales year-round. These areas represent a relatively small proportion of the total range of each population and it is unknown whether additional critical habitat may be required to support Resident Killer Whale recovery objectives. Preliminary data suggest that key areas may exist in other locations and at different times of the year, but are not sufficient to warrant proposing these habitats as critical without further research. The strategies listed here provide measures for the protection of the critical habitats referred to above, as well as direction for the potential identification of additional critical habitat.

Objective 4 strategies

- Develop a year-round comprehensive survey program for Resident Killer Whales
- Identify key feeding areas and other critical habitat of Resident Killer Whales throughout the year
- Protect the access of Resident Killer Whales to their critical habitat
- Protect critical habitat areas through assessment and mitigation of human activities that result in contamination and physical disturbance

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- Ensure that sufficient prey is available to Killer Whales in their critical habitat.
- Ensure trans-boundary cooperation in the identification and protection of critical habitat

The first two strategies listed above focus on determining whether additional areas should be proposed for critical habitat designation. The remaining strategies, as well as those in Objectives 1, 2 and 3, will help to preserve and protect designated critical habitat.

6.3 Effects on non-target species

The objectives outlined above are designed to protect Resident Killer Whale prey populations and their habitat from exploitation and degradation including contaminants and noise. The spin-off effects of this are likely to be widespread and will be beneficial to human health as well as to a wide variety of organisms ranging from fish to sea birds, since all are affected by contaminants and exploitation. It is likely this benefit will far exceed the increased mortality of prey species associated with increased Killer Whale numbers.

6.4 Evaluation and the status of strategies for recovery

The following are examples of performance measures that may be used to assess the effectiveness of the objectives and strategies, and to determine whether recovery remains feasible. Detailed recovery measures that provide the best chance of meeting the recovery goal and objectives for Northern and Southern Resident Killer Whales, and timelines for their implementation, were identified during the development of the action plan (DFO 2017a).

Progress towards meeting these objectives and strategies was detailed in the Report on the Progress of Recovery Strategy Implementation for Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada for the Period 2009-2014 (DFO 2016b) and will continue to be reported on every five years until the objectives have been achieved or until recovery of the species is no longer feasible.

Table 3. Examples of performance measures that may be used to assess the effectiveness of the broad strategies used to achieve the objectives of the recovery strategy for the Northern and Southern Resident Killer Whales in Canada

Objective no. /threat	Broad strategy	Status*	Examples of performance measures for broad strategies and objectives
Recovery Goal: Ensure long-term population viability	Monitor population dynamics and demography	Underway	Completion of annual censuses Genetic sampling and analyses completed Evaluation of population status to ensure growth
	Develop population models	Underway	Models developed that incorporate social and genetic structure and explain population trends
	Quantitative framework for understanding effects of threats on population dynamics	Proposed	Models completed that incorporate threats into population dynamic models

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Objective no. /threat	Broad strategy	Status*	Examples of performance measures for broad strategies and objectives
	Studies to identify role of culture in foraging ecology and sociobiology	Proposed	Peer-reviewed publications on role of culture in Killer Whale foraging
	Studies to identify role of culture in maintaining genetic diversity	Underway	Biopsy samples collected and analyzed to identify paternity
1. Ensure adequate and accessible food supply	Determine seasonal/annual diet/ energetic requirements	Underway	Prey fragment samples collected year-round for multiple years
			Alternative diet sampling methods tested to confirm diet
			Winter and spring distribution and diet of Resident Killer Whales identified
	Identify key prey populations and feeding areas	Underway	Complete diet sampling of all members of population and during all seasons
			Prey identified to stock, not just species
	Monitoring prey populations to detect changes in abundance or availability	Underway	Population assessment completed for all stocks identified as important prey for Resident Killer Whales
	Protect access to important feeding areas	Proposed	Guidelines developed for human activities in important whale feeding areas
	Protection of prey populations	Underway	Incorporation of Killer Whale predation into fisheries management plans
2. Chemical and biological contaminants	Investigate effects of contaminants on health and reproductive capacity of Killer Whales	Underway	Peer reviewed publication on contaminants in Resident Killer Whales
			Develop and apply tests to measure the health of Killer Whales
	Monitor pollutants, diseases, pathogens, parasites and pathologies in Killer Whales	Underway	Extensive sampling of populations to establish baseline contaminant levels
			Completed analyses of contaminants in samples
			Complete necropsies of stranded Killer Whales.
	Identify and prioritize key chemical and biological pollutants	Underway	Completed sampling and analyses of contaminants in Killer Whale prey
	Identify and prioritize key sources of chemical and biological pollutants	Underway	Water quality sampling in areas throughout range of Resident Killer Whales
	Reduce introduction of chemical pollutants into environment	Underway	Measurable decline in contaminant levels in environment (prey, sediments etc.)
	Mitigate impacts of currently used pollutants	Underway	Evaluation of effectiveness of legislation completed

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Objective no. /threat	Broad strategy	Status*	Examples of performance measures for broad strategies and objectives
	Mitigate impacts of 'legacy' pollutants	Underway	PCB sources identified
	Reduce introduction of biological pollutants	Underway	Evaluation of effectiveness of legislation completed
3. Acoustical and Physical Disturbance	Investigate short-term effects of chronic forms of disturbance	Underway	Controlled studies of whale/boat interactions completed
	Investigate short-term effects of acute forms of disturbance	Proposed	Complete controlled study of marine mammals in areas where seismic exploration is active
	Investigate long-term effects of chronic forms of disturbance	Proposed	Complete model that incorporates effects of increasing ambient noise levels on communication signals of Resident Killer Whales
	Investigate long-term effects of acute forms of disturbance	Proposed	Complete controlled study of marine mammals in areas where seismic exploration is active
	Determine baseline ambient and anthropogenic noise profiles	Proposed	Complete acoustic profiles of vessels most likely to be encountered by Resident Killer Whales
	Develop measures to reduce physical disturbance	Underway	Revised whale watching guidelines, and/ or regulations that reflect most recent understanding of effects of chronic physical disturbance
	Develop measures to reduce acoustic disturbance	Proposed	Establishment of acoustic sanctuaries in critical habitat areas
	Develop measures for reducing disturbance to high energy sources of sound	Proposed	Revised protocols for seismic and military sonar that reflect most recent understanding of physiological and behavioural responses to noise
4. Protection of critical habitat	Year-round comprehensive surveys to identify important areas for Killer Whales	Underway	Winter distribution of Resident Killer Whales well understood
	Identify key feeding areas and other critical habitat	Underway	Winter prey of Resident Killer Whales identified
	Protect access of whales to critical habitat	Underway	Sanctuaries within critical habitat established
	Protect critical habitat from contamination, and physical disturbance	Proposed	Measurable reduction in contaminants in critical habitat
	Ensure sufficient prey available to whales in critical habitat	Proposed	Key prey populations in critical habitat areas
	Ensure trans-boundary cooperation in identification and protection of critical habitat	Proposed	Formal identification of critical habitat recognized by international agreement

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Note: A thorough listing of recovery measures was included in the action plan (DFO 2017a).

* The information presented in the status column of this table represents the status of each strategy at the time of the development of the original recovery strategy (2008). See Table 3 in the Report on the Progress of Recovery Strategy Implementation for Northern and Southern Resident Killer Whales (DFO 2016b) for more recent information regarding progress made toward each of these objectives and strategies.

7. Critical habitat

7.1 Identification of the species' critical habitat

7.1.1 General description of the species' critical habitat

Critical habitat is defined in SARA section 2(1) as "...the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in a recovery strategy or in an action plan for the species."

SARA defines habitat for aquatic species at risk as "... spawning grounds and nursery, rearing, food supply, migration and any other areas on which aquatic species depend directly or indirectly in order to carry out their life processes, or areas where aquatic species formerly occurred and have the potential to be reintroduced" [s. 2(1)].

Partial critical habitat was identified for both Northern and Southern Resident Killer Whales in the 2008 recovery strategy. Northern Resident Killer Whale critical habitat included the waters of Johnstone Strait and southeastern Queen Charlotte Strait (Figure 4), while Southern Resident Killer Whale critical habitat included the transboundary waters in southern BC, including the southern Strait of Georgia, Haro Strait, and Juan de Fuca Strait (Figure 5). These critical habitat areas were protected through the making of a SARA Critical Habitat Order in 2009. In 2011, minor amendments were made to the critical habitat section of the 2008 recovery strategy. These amendments clarified that attributes of critical habitat identified in the 2008 recovery strategy are a part of critical habitat.

Two additional areas were identified for consideration as critical habitat for Resident Killer Whales in DFO (2017b).These areas include: i) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (Northern and Southern Resident Killer Whale critical habitat, Figures 4 and 5) and ii) the waters of western Dixon Entrance along the north coast of Graham Island from Langara Island to Rose Spit (Northern Resident Killer Whale critical habitat, Figure 4).

For Northern and Southern Resident Killer Whales, critical habitat is identified in this recovery strategy to the extent possible, using the best available information. A description of the functions, features, and attributes that support the identification of critical habitat is provided in section 7.1.3.

Under SARA, critical habitat must be legally protected within 180 days of being identified in a recovery strategy or action plan through a SARA Critical Habitat Order or under any other Act of Parliament, and through prohibitions to the destruction of any part of critical habitat.

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This recovery strategy identifies critical habitat for Resident Killer Whales as four distinct geographic areas. These include: 1) the waters of Johnstone Strait and southeastern Queen Charlotte Strait (Northern Resident Killer Whale critical habitat); 2) transboundary waters in southern British Columbia, including the southern Strait of Georgia, Haro Strait, and Juan de Fuca Strait (Southern Resident Killer Whale critical habitat); 3) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (Northern and Southern Resident Killer Whale critical habitat); and 4) waters of west Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit (Northern Resident Killer Whale critical habitat).

It is unknown if the critical habitat identified in this recovery strategy is sufficient to achieve the species' recovery goal and objectives. The schedule of studies outlines the research required to identify additional critical habitat and to acquire more detail about the critical habitat identified to achieve the species' recovery goal and objectives. Additional critical habitat may be identified in future amendments to this recovery strategy.

7.1.2 Information and methods used to identify critical habitat

The movement patterns of Resident Killer Whales are influenced by the availability of their preferred prey. During the summer and fall months, Resident Killer Whale distribution is associated spatially and temporally with the migratory routes of Chinook Salmon as this important prey species returns to natal streams to spawn (Ford and Ellis 2005). For the rest of the year there is less information available on the diet, distribution, and movement patterns of Resident Killer Whales, though surveys, passive acoustic monitoring, and satellite tagging studies have been conducted to address these knowledge gaps (Riera 2012; Hanson et al. 2013; DFO 2017b). Determining whether there are additional habitats that the whales utilize during winter and spring that are critical for the survival or recovery of these populations has been and continues to be a priority. This will need to take into account the likelihood that changes in the availability of major stocks of key prey species may cause corresponding shifts in the geographic location of critical habitat for Resident Killer Whales.

Methods and rationale used to designate each of the four critical habitat areas identified to date are detailed below.

Northern Resident Killer Whale critical habitat: Johnstone Strait and southeastern Queen Charlotte Strait

Analyses of existing data on coast-wide occurrence patterns of Northern Resident Killer Whales provide quantitative documentation of the importance of Johnstone Strait and southeastern Queen Charlotte Strait (Figure 4) to these whales (Ford 2006). These analyses, along with previously published information, form the basis for this area's critical habitat designation.

One or more Northern Resident matrilines are sighted in this area on most days during July through October, with peak numbers generally in mid-July to mid-September (Nichol and Shackleton 1996; Ford 2006). Sightings become more sporadic in the area during November, are scarce from December through May. Although all Northern Resident pods have been identified in the area, different pods do not use the area equally (Ford et al. 2017). For example, 75% of encounters documented during 1990-2004 included all or part of A1 pod, while only 0.7% of encounters during this same period included I18 pod, a group of similar size. Northern Resident Killer Whales in the Johnstone Strait area spend the majority of time foraging for

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salmon, primarily Chinook during July-September and Chum in October (Ford 1989; Ford et al. 1998; Ford 2006; Ford et al. 2010; DFO 2017b). Other activities undertaken in the area include resting, socializing, and beach rubbing (Ford 1989; Ford et al. 2000; Ford 2006).

Beach rubbing appears to be an important activity for Northern Resident Killer Whales. More than 90% of the Northern Resident Killer Whales observed in Johnstone Strait visit the rubbing beaches, and spend about 10% of their time there (Briggs 1991). During this time they are very sensitive to disturbance. In recognition of the importance of this habitat to Resident Killer Whales, in 1982 the Province of British Columbia established the Robson Bight–Michael Bigg Ecological Reserve to protect a portion of western Johnstone Strait and the foreshore near Robson Bight, where the rubbing beaches are located. This Ecological Reserve includes the primary foraging areas for Killer Whales utilizing the Johnstone Strait area, as well as at least six beaches used to various degrees by these whales for rubbing, and is included as critical habitat within the Johnstone and southeastern Queen Charlotte Straits boundaries (see Table 4).

Given the importance of this area to a significant component of the Northern Resident community for a major portion of the salmon feeding season, and the traditional use of rubbing beaches located there, this area has been designated as critical habitat as defined in SARA.

Southern Resident Killer Whale critical habitat: transboundary waters of the southern Strait of Georgia, Haro Strait, and Juan de Fuca Strait

The transboundary waters of southern BC and Washington State (Figure 5) represent an important area of high concentration of Southern Resident Killer Whales. This area includes waters under both Canadian and U.S. jurisdiction. Analyses of existing data on coast-wide occurrence patterns of Southern Resident Killer Whales have been completed by NOAA as part of the ESA designation of critical habitat in collaboration with DFO (NMFS 2006a). This assessment provided quantitative documentation of the importance of these transboundary areas to these whales and forms, along with previously published information, the basis for the critical habitat identification.

This critical habitat area is utilized regularly by all three Southern Resident pods during June through October in most years (Osborne 1999; Wiles 2004). J pod appears to be present in the area throughout much of the remainder of the year, but two Southern Resident pods, K and L, are typically absent during December through April. This critical habitat is of great importance to the entire Southern Resident community as a foraging range during the period of salmon migration, and thus has been designated as critical habitat under SARA.

Northern and Southern Resident Killer Whale critical habitat: southwestern Vancouver Island; and Northern Resident Killer Whale critical habitat: western Dixon Entrance

Southwestern Vancouver Island and western Dixon Entrance were identified as habitats of special importance to Northern and Southern Resident Killer Whales based on photo-identification, predation, and acoustic data. Passive acoustic monitoring was used to supplement the boat-based photo-identification studies, as these areas are remote and exposed to open ocean conditions, making small boat studies difficult. Using both photo-identification and detections of Resident Killer Whale vocalizations on acoustic recording devices allowed for year-round assessment of Resident Killer Whale occurrence in these areas. Tissue samples and scales were collected at predation sites to identify prey and assess Resident Killer Whale

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diet. See DFO (2017b) for detailed information about the methods used to identify these two areas as Resident Killer Whale critical habitat.

Critical habitat off southwestern Vancouver Island (Figures 4 and 5) includes the Canadian portions of Swiftsure Bank, where acoustic monitoring between August 2009 and July 2011 indicated considerable habitat use by both Southern and Northern Resident Killer Whales over much of the year. Additionally, it encompasses several other relatively shallow banks, including La Pérouse Bank which, like Swiftsure Bank, is among the most productive fishing areas for Chinook Salmon on the west coast of North America. During this acoustic monitoring, all three Southern Resident Killer Whale pods were detected in this area, with L pod being the most frequently documented (Ford et al. 2017). The area is important for Southern Resident Killer Whales, both during summer, when groups of whales spend time west of the critical habitat area in the transboundary waters in southern BC, and in winter, when whales are mostly absent from the southern BC critical habitat area, but were detected frequently off southwestern Vancouver Island (DFO 2017b). Northern Resident Killer Whales were detected in all months of the year, especially in March and April. Fifteen of the 16 pods in the Northern Resident Killer Whale population were also encountered during boat surveys in this area. Given the importance of southwestern Vancouver Island to both Northern and Southern Resident Killer Whales throughout most of the year, it meets the definition for critical habitat under SARA for both of these populations.

Critical habitat in western Dixon Entrance (Figure 4) is an important foraging area for Northern Resident Killer Whales, and is situated on migratory routes for a wide variety of Chinook Salmon stocks. Northern Resident Killer Whales were detected during acoustic monitoring activities between September 2009 and June 2012 in this area in all months of the year, but most frequently during late winter and spring (DFO 2017b). Certain pods that are rarely encountered in Northern Resident Killer Whale critical habitat in Johnstone and eastern Queen Charlotte Straits at any time of year were frequently detected in western Dixon Entrance (DFO 2017b). As habitat needed for recovery, western Dixon Entrance appears to be far more relevant for these pods than the Johnstone /Queen Charlotte Straits critical habitat area. Pods belonging to G clan were documented in western Dixon Entrance most often, followed by R01 pod (R clan). The use of western Dixon Entrance by members of the population that are rarely documented in the Johnstone Strait area and during times of year when detections of this population in the Johnstone Strait area are infrequent indicates its importance to Northern Resident Killer Whales. This area thus meets the definition for critical habitat under SARA.

7.1.3 Identification of critical habitat

Geographic information

Four critical habitat areas have been identified for Resident Killer Whales. Critical habitat has been identified using the bounding box approach. This means that critical habitat is not composed of the entire area within the identified boundaries but only those areas within the identified geographical boundaries where the described biophysical features, attributes, and the functions they support occur, as described in Table 4 and defined by the coordinates in Appendix D. The critical habitat's biophysical functions, features, and attributes are described below and summarized in Table 4.

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Northern Resident Killer Whale critical habitat: Johnstone Strait and southeastern Queen Charlotte Strait

The boundaries of the existing critical habitat area for Northern Resident Killer Whales include the waters of Johnstone Strait and southeastern Queen Charlotte Strait, and the channels connecting these straits as depicted in Figure 4. This area is approximately 905 km^2.

Southern Resident Killer Whale critical habitat: Transboundary waters of the southern Strait of Georgia, Haro Strait, and Juan de Fuca Strait

Critical habitat for Southern Resident Killer Whales includes the transboundary areas of southern BC and Washington State. The portion of this critical habitat that is in Canadian waters is approximately 3,390 km^2 in size, and includes the Canadian side of Haro and Juan de Fuca Straits, as well as Boundary Pass and adjoining areas in the Strait of Georgia, as depicted in Figure 5.

Much of the area that qualifies as critical habitat for Southern Resident Killer Whales falls within U.S. jurisdiction, and the identification of critical habitat under SARA only applies to the portion of the area that is within Canadian waters (Figure 5). In November 2005, the U.S. listed Southern Resident Killer Whales as Endangered under the ESA (NMFS 2006a). As a result, 6,630 km^2 of U.S. inland waters of Washington State and Juan de Fuca Strait were designated as critical habitat under the ESA in November 2006 (NMFS 2006b, see Figure 5).

Northern and Southern Resident Killer Whale critical habitat: Southwestern Vancouver Island

Critical habitat for Northern and Southern Resident Killer Whales located off southwestern Vancouver Island forms a contiguous westward extension of the critical habitat area for Southern Resident Killer Whales described above. The southern boundary is formed by the Exclusive Economic Zone of Canada and extends to the 200 m isobath, or depth contour. See Figures 4 and 5 for the boundaries of this critical habitat, which encompass an area of 5,025 km^2.

Northern Resident Killer Whale critical habitat: Western Dixon Entrance

Critical habitat for Northern Resident Killer Whales in western Dixon Entrance includes most of the coastal waters off the north side of Graham Island. The shallow waters of Naden Harbour, Massett Inlet, and McIntyre Bay are not included as critical habitat, due to limited use of these areas by Resident Killer Whales. See Figure 4 for the boundaries of this critical habitat, which encompass an area of 1,394 km^2.

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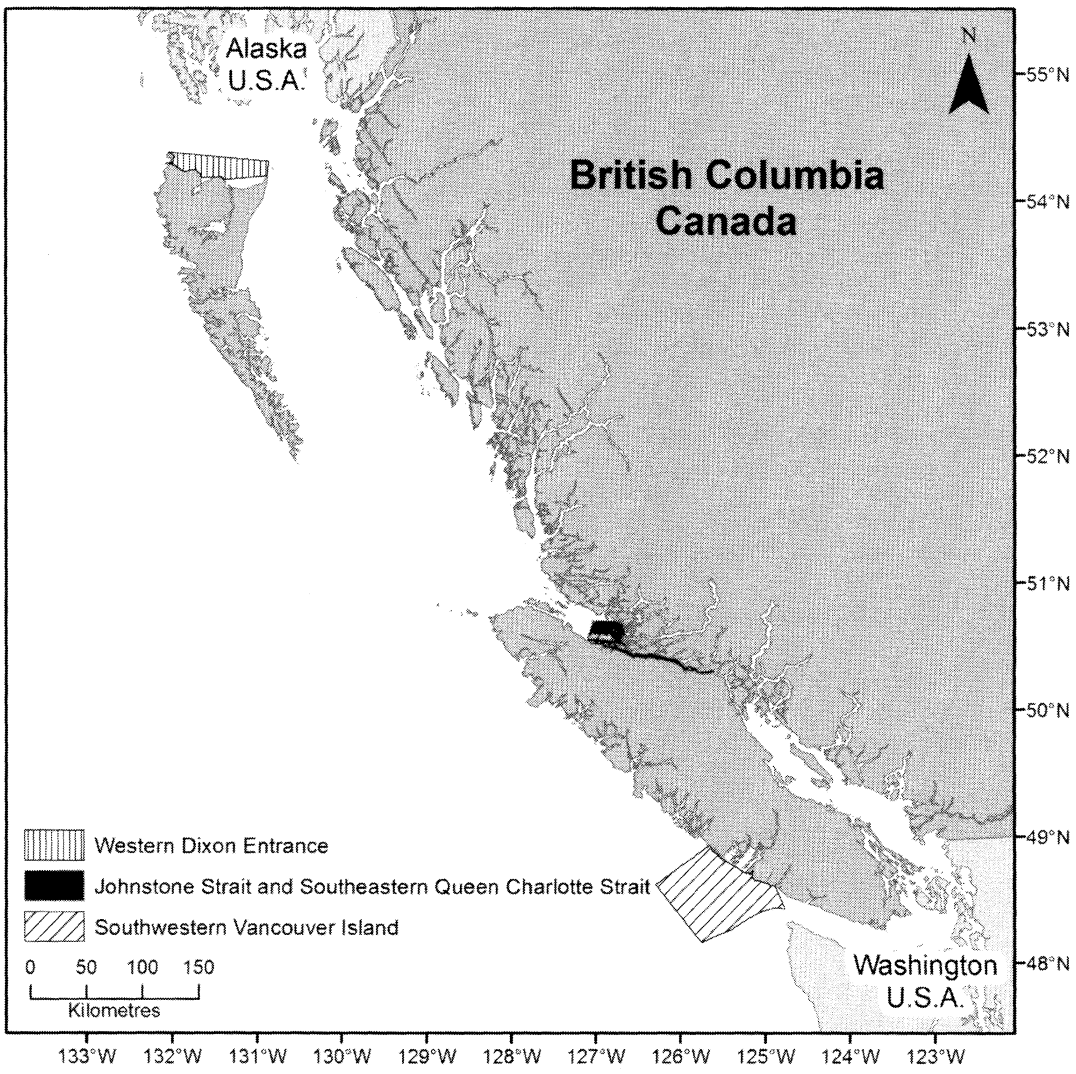

Figure 4. Critical habitat areas identified for Northern Resident Killer Whales. Critical habitat is not composed of the entire area within the identified boundaries but only those areas within the identified geographical boundaries where the described biophysical features and the functions they support occur, as described in Table 4.

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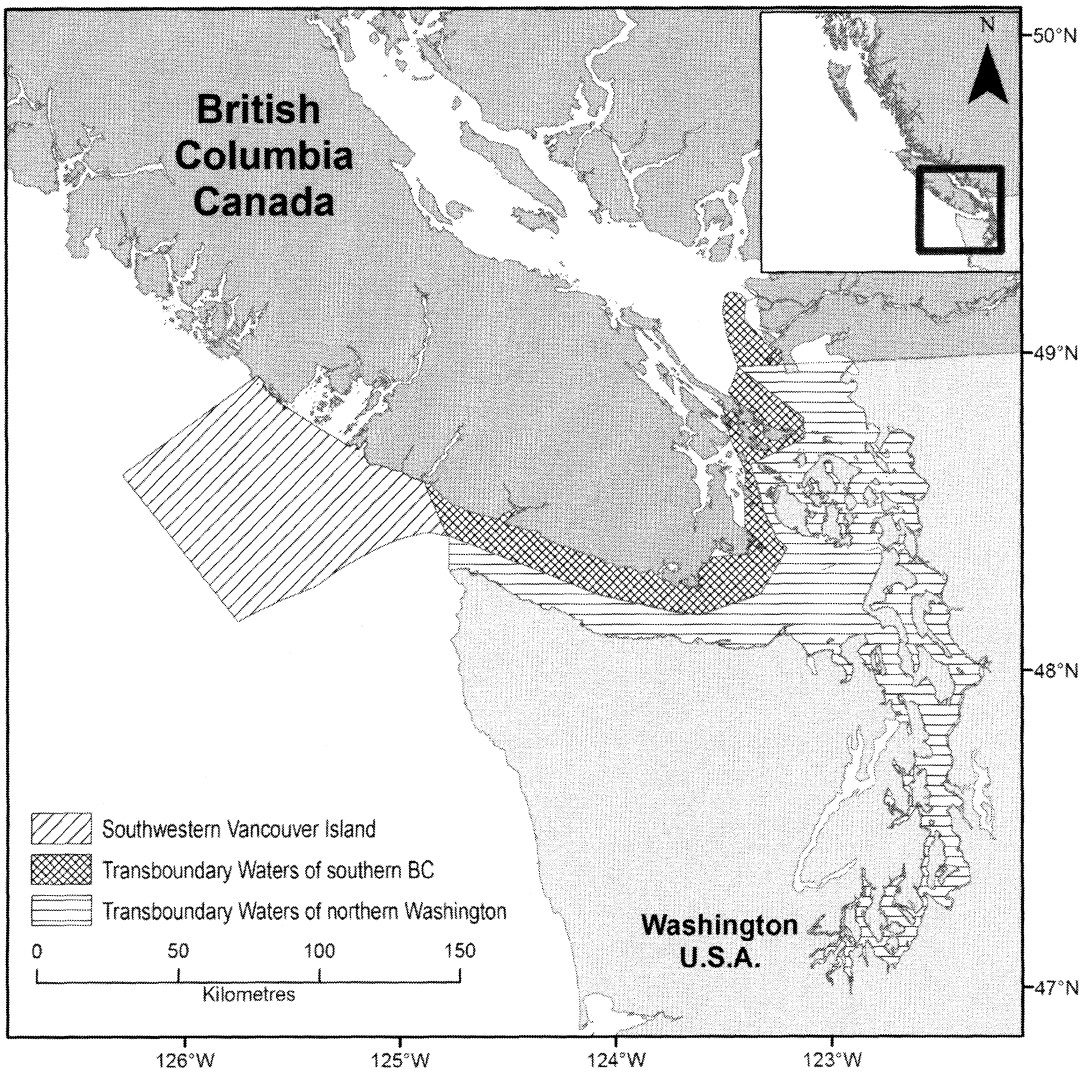

Figure 5. Critical habitat areas identified for Southern Resident Killer Whales. Critical habitat is not composed of the entire area within the identified boundaries but only those areas within the geographical boundaries where the described biophysical features and the functions they support occur, as described in Table 4. The hatched areas in the transboundary waters of southern BC and off southwestern Vancouver Island are the critical habitat areas in Canadian waters for Southern Resident Killer Whales, as designated under SARA. The hatched area in the transboundary waters of northern Washington State is designated as Southern Resident Killer Whale critical habitat under the U.S. ESA.

Biophysical functions, features, and attributes

Seasonal distribution and movement patterns of Resident Killer Whales in Canadian Pacific waters are strongly associated with the availability of their preferred prey, Chinook Salmon, and secondarily Chum Salmon (Ford 2006; Ford and Ellis 2006; Ford et al. 2010; Hanson et al. 2010). Habitats that are important for the survival or recovery of Resident Killer Whales are those that provide for profitable foraging on these key prey species, including the acoustic and

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physical space required to successfully pursue and capture prey. Other activities, including resting and socializing, similarly depend on an acoustic environment that does not impede effective communication among whales.

The only activity that is strictly associated with particular geographic locations is beach rubbing by Northern Resident Killer Whales, which only takes place at specific traditional sites. Several of these sites are included in the Northern Resident Killer Whale critical habitat located in Johnstone Strait (Ford 2006). These rubbing beaches are composed of small rounded pebbles approximately 1 – 5 cm in diameter and are usually situated along otherwise rocky shorelines (Ford pers. comm. 2018).

Table 4 summarizes the best available knowledge of the biophysical functions, features, and attributes for Northern and Southern Resident Killer Whales. Note that not all attributes in Table 4 must be present in order for a feature to be identified as critical habitat. If a feature as described in Table 4 is present and capable of supporting the associated functions, the feature is considered critical habitat for the species.

The features, functions, and attributes described in Table 4 are based on narrative provided in the 2011 recovery strategy and on Table 1 of DFO (2017b). They apply to all four critical habitat areas and to both populations, with the exception of those associated with beach rubbing, a function that is known to be important for Northern Resident Killer Whales but has not been documented for Southern Residents. As Resident Killer Whales travel with their matrilines throughout their lives, the features, functions, and attributes described also apply to all life stages of Resident Killer Whales.

There is currently insufficient information with which to quantify the levels of many of the attributes listed in Table 4 required to support the features and functions of critical habitat. For example, the density, quantity, and quality of prey needed to support Resident Killer Whale populations are unknown. Additionally, although it is assumed that Chinook remains the primary prey species of Resident Killer Whales throughout the year, the vast majority of Resident Killer Whale prey samples have been collected during summer and fall, and their year-round diet is not well-understood. It is therefore possible that additional important prey species may be identified in the future. Broad studies focused on identifying additional habitats that are important to Resident Killer Whales, and to better understand threats to critical habitat are included in section 7.2. In addition, the action plan for Northern and Southern Resident Killer Whales includes several recovery measures to refine knowledge of the functions, features and attributes of critical habitat. The descriptions of the attributes in Table 4 may be refined in the future, as additional information becomes available.

Table 4. Summary of the biophysical functions, features, and attributes of critical habitat necessary for the survival or recovery of Northern and Southern Resident Killer Whales

Function	Feature	Attribute
Feeding and foraging	Availability of Chinook Salmon, Chum Salmon, and other important prey species	Sufficient quantity and quality of Chinook Salmon to provide for profitable foraging Diversity of Chinook stocks with a variety of spatial and temporal migration patterns sufficient to maintain availability

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		Sufficient quantity and quality of Chum Salmon and other species that comprise part of the Resident Killer Whale diet
Feeding and foraging Reproduction, socializing, resting Beach rubbing (Northern Resident Killer Whales)	Acoustic environment	Anthropogenic noise level that does not interfere with life functions and is sufficient for effective acoustic social signaling and echolocation to locate prey Anthropogenic noise level that does not result in loss of habitat availability or function
Feeding and foraging Reproduction, socializing, resting	Water quality	Water quality of a sufficient level to support Chinook stocks Water quality of a sufficient level to support Chum Salmon and other species that comprise part of the Resident Killer Whale diet Water quality of a sufficient level so as not to result in loss of function
Feeding and foraging Reproduction, socializing, resting	Physical space	Unimpeded physical space surrounding individual whales (minimum vessel approach distance 200m)
Beach rubbing (Northern Resident Killer Whales)	Rubbing beach	Suitable physical habitat to allow for beach rubbing behaviour

Summary of critical habitat relative to the recovery goal and objectives

Critical habitat areas identified in this recovery strategy are areas that, based on current best available information, the Minister of Fisheries and Oceans and the Minister responsible for the Parks Canada Agency consider necessary to partially achieve the recovery goal and objectives required for the survival or recovery of Northern and Southern Resident Killer Whales.

It is unknown if critical habitat identified in this recovery strategy is sufficient to achieve the species' recovery goal and objectives. The schedule of studies outlines the research required to identify additional critical habitat and to acquire more detail about the critical habitat identified to achieve the species' recovery goal and objectives. Additional critical habitat may be identified in future updates to the recovery strategy.

7.2 Schedule of studies to identify critical habitat

Further research is required to refine the understanding of the functions, features, and attributes of the currently identified critical habitat, to identify potential additional critical habitat necessary to support the species' recovery goal and objectives and to protect the critical habitat from destruction. This additional work includes the studies listed in Table 5. Refer to the report on the progress of recovery strategy implementation for the Northern and Southern Resident Killer Whales in Canada (DFO 2016b) for more details regarding the progress made and the status of the studies outlined in Table 5. In addition to the broad studies outlined in Table 5, the Action

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Plan for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada (DFO 2017a) includes more specific recovery measures focused on refining the understanding of the features, functions, and attributes outlined in Table 4, on threats to critical habitat and on supporting identification of additional areas for critical habitat identification.

Table 5. Schedule of studies to refine critical habitat and identify potential additional critical habitat areas for Northern and Southern Resident Killer Whales

Study	Status
Year-round comprehensive surveys to identify areas of occupancy	Underway
Identify key feeding areas throughout the year to determine whether they should be proposed as additional critical habitat	Underway
Identify activities other than foraging that may be important functions of critical habitat	Underway
Identify sources of acoustic disturbance that may negatively impact or affect access to critical habitat	Underway
Identify sources of physical disturbance that may negatively impact or affect access to critical habitat	Underway
Identify sources of biological and chemical contaminants that may negatively impact critical habitat	Underway
Identify factors that may negatively affect an adequate and accessible supply of prey in areas of critical habitat	Underway

7.3 Activities likely to result in the destruction of critical habitat

Under SARA, critical habitat must be legally protected within 180 days of being identified in a recovery strategy or action plan. Northern Resident Killer Whale critical habitat in Johnstone and southeastern Queen Charlotte Straits and Southern Resident Killer Whale critical habitat in the transboundary waters of southern BC has been protected through a SARA Critical Habitat Order since 2009. It is anticipated that protection of the four Resident Killer Whale critical habitat areas identified in this recovery strategy will be accomplished through a SARA Critical Habitat Order made under subsections 58(4) and (5), which will invoke the prohibition in subsection 58(1) against the destruction of any part of the identified critical habitat. The term "recovery strategy" is defined in subsection 2(1) of SARA as meaning "a recovery strategy included in the public registry under subsection 43(2), and includes any amendment to it included in the public registry under section 45". Thus, reading the definition of "critical habitat" in conjunction with the definition of "recovery strategy," the Critical Habitat Order will apply not only to the critical habitat identified in the recovery strategy, but also to any modification to the critical habitat subsequently made in an amended recovery strategy, without the need to amend the Critical Habitat Order.

The following examples of activities likely to result in the destruction of critical habitat are based on known human activities that are likely to occur in and around critical habitat and would result in the destruction of critical habitat if unmitigated. The list of activities is neither exhaustive nor exclusive and has been guided by the threats described in section 4 of this recovery strategy.

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The absence of a specific human activity does not preclude or restrict the Department or Parks Canada Agency's ability to regulate that activity under SARA. Furthermore, the inclusion of an activity does not result in its automatic prohibition and does not mean the activity will inevitably result in destruction of critical habitat. Every proposed activity must be assessed on a case-by-case basis and site-specific mitigation will be applied where it is reliable and available. Where information is available, thresholds and limits have been developed for critical habitat attributes to better inform management and regulatory decision making. However, in many cases knowledge of a species and its critical habitat's thresholds of tolerance to disturbance from human activities is lacking and must be acquired.

Reduced prey availability

Availability of Chinook and Chum Salmon is key to the presence of Resident Killer Whales in critical habitat areas (Ford and Ellis 2005; DFO 2017b). Maintaining an adequate food supply for Resident Killer Whales depends on many factors, including the body size and condition of prey, as well as sufficient stock diversity of key prey species to maintain prey availability over time. Activities that result in insufficient abundance, quality, or availability of Chinook Salmon, Chum Salmon, or other Resident Killer Whale prey species could therefore lead to destruction of critical habitat. These include fishing for Chinook Salmon, Chum Salmon, and other important prey species, as well as activities that impact the survival and prey supply of these species such that they are not of sufficient abundance, quality, or availability for Resident Killer Whales.

Acoustic disturbance

There is growing awareness of the impacts of anthropogenic noise on cetaceans (Nowacek et al. 2007; Weilgart 2007). As Killer Whales rely on sound to carry out their life functions, including foraging and socializing, the acoustic environment is an important component of critical habitat. Threats to the acoustical integrity of critical habitat include both acute and chronic noise, and are discussed in detail in section 4.2.3 Underwater noise. Acute noise, including seismic surveys, military and commercial sonars, pile driving and underwater explosions, can result in behavioural changes and displacement from habitat for cetaceans (Morton and Symonds 2002; Weilgart 2007). Chronic noise is primarily associated with vessel traffic, and can result in masking of communication and echolocation signals of Killer Whales (Erbe 2002; Foote et al. 2004; Holt et al. 2009).

Environmental contaminants

Environmental contaminants pose a serious threat to Killer Whales. These contaminants and their sources are discussed in section 4.2.1. As high trophic level, long-lived animals, Killer Whales are particularly vulnerable to persistent bioaccumulating toxins (PBTs) that accumulate in their fatty tissues as they feed on already contaminated prey. The introduction of high levels of contaminants is therefore a threat to Resident Killer Whale critical habitat. While many contaminants are airborne and dispersed throughout the coastal waters of BC, the waters surrounding the lower mainland and Vancouver Island are particularly at risk due to their proximity to human settlement.

The threat of a spill of oil or other toxic material within the areas of critical habitat poses not only an immediate and acute risk to the health of Resident Killer Whale populations (see section 4.2.4), but has the potential to make critical habitat areas uninhabitable for an extended period of time.

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Physical disturbance

Vessels in close proximity to Killer Whales have the potential to disrupt behaviours, including foraging and beach rubbing (Williams et al. 2006; Lusseau et al. 2009). Additionally, prey must be physically accessible to Resident Killer Whales and physical obstacles at the surface and underwater which interfere with whales' abilities to pursue and capture prey represent a threat to critical habitat.

Killer Whales are particularly sensitive to disturbance while beach rubbing (Williams et al. 2006); the physical presence of vessels and other obstacles can not only disrupt beach rubbing, but can also prevent Killer Whales from approaching rubbing beaches to initiate this behaviour.

Geophysical disturbance

A key feature of the Northern Resident Killer Whale critical habitat in Johnstone and southeastern Queen Charlotte Straits is the presence of several rubbing beaches. Activities associated with the geophysical destruction of rubbing beaches are therefore threats to critical habitat. Rubbing beaches may also be vulnerable to activities that alter stream flow and siltation; thus, activities that occur upstream of these beaches, even outside of the designated critical habitat area, can pose a threat to critical habitat.

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Table 6. Examples of activities likely to result in the destruction of critical habitat of Northern and Southern Resident Killer Whales

Threat	Activity	Effect - pathway	Function affected	Feature affected	Attribute affected
Reduced prey availability	Fishing for Chinook Salmon, Chum Salmon, and other important prey species Other activities that are detrimental to habitat and survival of prey (e.g. fishing for forage fish species)	Loss of prey Loss of forage fish for prey species	Feeding and foraging	Availability of Chinook Salmon, Chum Salmon and other important prey species	Sufficient quantity and quality of Chinook Salmon to provide for profitable foraging Diversity of Chinook stocks with a variety of spatial and temporal migration patterns sufficient to maintain availability Sufficient quantity and quality of Chum Salmon and other species that comprise part of the Resident Killer Whale diet
Acoustic disturbance	Vessel traffic Seismic surveys, military, and commercial sonars Pile driving, underwater explosions	Chronic noise resulting in masking of communication and echolocation Acute and chronic acoustic disturbance resulting in disruption of behaviour or displacement from habitat	Feeding and foraging Reproduction, socializing, resting Beach rubbing (Northern Resident Killer Whales)	Acoustic environment	Anthropogenic noise level that does not impede effective acoustic social signaling and echolocation to locate prey Anthropogenic noise level that does not result in loss of habitat availability or function
Environmental contaminants	Release of deleterious substances Point source and non-point source pollution	Loss of prey or reduction in prey quality Loss of water quality	Feeding and foraging Reproduction, socializing, resting	Availability of Chinook Salmon, Chum Salmon, and other important prey species Water quality	Water quality of a sufficient level to support Chinook stocks Water quality of a sufficient level to support Chum Salmon and other species that comprise part of the Resident Killer Whale diet Water quality of a

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					sufficient level so as not to result in loss of function
Physical disturbance	Vessel approach to whales (within 200m) Vessel anchoring in vicinity of rubbing beaches Activities that prevent approach of whales to rubbing beaches; or that displace or disrupt rubbing behaviour Human presence on rubbing beaches when whales present or nearby	Reduction of physical space available to whales Displacement of whales from rubbing beaches, prevention of use of rubbing beaches	Feeding and foraging Reproduction, socializing, resting Beach rubbing (Northern Resident Killer Whales)	Physical space	Unimpeded physical space surrounding individual whales (minimum vessel approach distance 200m)
Geophysical disturbance	Shore-based industrial activities that could alter beach substrate Activities that result in alteration of stream flow to rubbing beaches, beach sediment, and siltation	Geophysical disturbance resulting in loss of function	Beach rubbing (Northern Resident Killer Whales)	Rubbing beach	Suitable physical habitat to allow for beach rubbing behaviour

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8. Statement on action plans

SARA's approach to recovery planning is a two-part approach, the first part being the recovery strategy and the second part being the action plan. An action plan contains specific recovery measures or activities required to meet the objectives outlined in the recovery strategy.

An action plan for Northern and Southern Resident Killer Whales was completed and posted to the Species at Risk Public Registry in 2017 (DFO 2017a). Additionally, several multi-species action plans that include Resident Killer Whales have been developed by the Parks Canada Agency and posted to the Species at Risk Public Registry. These include the multi-species action plan for Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve, and Haida Heritage Site (Parks Canada Agency 2016); the multi-species action plan for Pacific Rim National Park Reserve of Canada (Parks Canada Agency 2017a); and the proposed multi-species action plan for Gulf Islands National Park Reserve of Canada (Parks Canada Agency 2017b).

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Appendix A. Record of cooperation and consultation

Northern and Southern Resident Killer Whales are listed on Schedule 1 of the Species at Risk Act (SARA) and as an aquatic species are under federal jurisdiction and managed by Fisheries and Oceans Canada (DFO): 200 - 401 Burrard Street, Vancouver, BC. Southern Resident Killer Whales are a transboundary population and the United States has developed a recovery plan for Southern Resident Killer Whales as mandated under their Endangered Species Act.

To assist in the development of an initial draft of this recovery strategy, DFO brought together a diverse team of experts from various government, environmental, eco-tourism and non-governmental groups from both Canada and the United States. On the advice of the Species at Risk Coordinator at the BC Aboriginal Fisheries Commission, a letter of invitation followed up by phone calls was sent to all coastal First Nations seeking their interest in participating on the Recovery Team and/or Technical Workshop. No response was received from First Nations for inclusion on either initiative. Subsequent to the consultation process the Namgis First Nation has indicated an interest to be involved in future action planning and local implementation. A Technical Workshop was hosted in March 2004 to provide a forum for the sharing of knowledge and expertise on Killer Whales with an invited group of scientific and technical stakeholders which was invaluable in assisting the Resident Killer Whale Recovery Team to formulate an effective recovery strategy.

Public news releases announcing the Recovery Team and development of the recovery strategy and a notice of Public Consultations were sent to a distribution list of whale-related contacts provided to DFO in recent years from environmental groups, the eco-tourism sector, non-governmental organizations, government agencies and private citizens. An announcement was also placed in the Vancouver Aquarium Aquanews newsletter.

Additional input was sought through the internet (March 2005) on the draft recovery strategy and a discussion guide and feedback form were available. Responses were received from eco-tourism, non-government organizations, and the Mowachaht/Muchalaht First Nation. Input from the United States National Oceanic and Atmospheric Administration and the State of Washington Department of Fish and Wildlife was received through team participation. Feedback on the recovery strategy was also received from other government agencies including: the Department of National Defence, Province of BC, SARA Secretariat, Environment and Climate Change Canada and Natural Resources Canada. An external peer review was conducted by Volker Deecke, Ph.D., University of British Columbia, and Christophe Guinet, Centre d'Etudes Biologiques de Chize, France. All feedback from both government agencies and peer reviewers was incorporated into the recovery strategy.

A proposed version of the original recovery strategy was posted on the SARA Public Registry for a 60-day public comment period, from June 21 to August 20, 2007. During this time, numerous comments were received from a wide variety of sources including government agencies, commercial and recreational fishing groups, ecotourism operators, non-governmental organizations, and private citizens. All feedback from this comment period was considered and incorporated into the recovery strategy as appropriate. Following the public comment period, the proposed Recovery Strategy was revised by DFO in order to address public comments and to reflect the responsibilities of the competent Minister.

Minor amendments to the recovery strategy were made in 2011 to provide additional clarification regarding critical habitat for Northern and Southern Resident Killer Whales.

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Consultations were not held on the amendments as significant changes were not made to the recovery strategy.

In 2018, the recovery strategy was amended again to include identification of additional critical habitat for these populations and to provide minor updates to background and species information. A 30-day online external review on the draft amended recovery strategy was held June 12 – July 11, 2018. The external review was targeted for those potentially affected to provide feedback on the draft amended recovery strategy prior to public consultation. Numerous comments were received on the draft amended recovery strategy. 670 comments were submitted via an online feedback form on the consultation webpage set up by DFO's Regional SARA Program and 19 letters were received by email. Feedback was received from numerous groups and organization inclusive of Wildlife Management Boards, First Nations, the province of British Columbia, local government, commercial and recreational fishers, ecotourism operators, non-governmental organizations, other government agencies, and private citizens. Comments received from this review period were reviewed and one minor change was made to the draft amended recovery strategy (i.e. qualitative description of the attribute related to anthropogenic noise in Table 4).

Additional stakeholder, Aboriginal, and public input will be sought through the publication of the proposed document on the Species at Risk Public Registry for a 60-day public comment period. Comments received will inform the final document.

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Appendix B. Recovery team members

The following individuals composed the Recovery Team for the development of the 2008 recovery strategy.

Marilyn Joyce	Co-Chair: Resident Killer Whale Recovery Team Fisheries & Oceans Canada, Fisheries Management Branch Pacific Region, 200-401 Burrard Street, Vancouver, B.C., V6C 3S4, phone: 604-666-9965, email: joycema@pac.dfo-mpo.gc.ca
Lance Barrett-Lennard	Co-Chair: Resident Killer Whale Recovery Team Vancouver Aquarium Marine Service Center Stanley Park, Vancouver, BC V6B 3X8, phone: 604-659-3428, email: Lance.Barrett-Lennard@vanaqua.org
David Bain	Friday Harbor Laboratories, University of Washington, WA
Ken Balcomb	Centre for Whale Research, WA
Jim Borrowman	North Island Whale Watching Community, BC
John Durban	National Marine Fisheries Service, Alaska Fisheries Science Centre, National Marine Mammal Laboratory, WA
Graeme Ellis	Fisheries & Oceans Canada, Science Branch, Conservation Biology Section, BC
John Ford	Fisheries & Oceans Canada, Science Branch, Conservation Biology Section, BC
Christine Garrett	Environment and Climate Change Canada, Environmental Protection Branch, Commercial Chemicals Division , BC
Anna Hall	Whale Watch Operators Association North West, BC
Steve Jeffries	Washington Department of Fish and Wildlife, Marine Mammal Investigations, WA
Linda Jones	National Marine Fisheries Service, Northwest Fisheries Science Centre, National Marine Mammal Laboratory, WA
Brent Norberg	National Marine Fisheries Service, Protected Resources Division, WA
Peter Olesiuk	Fisheries & Oceans Canada, Science Branch, Conservation Biology Section, BC
Rich Osborne	The Whale Museum, WA
Rob Paynter	Ministry of Sustainable Resource Management, BC
Brian Reader	Western Canada Service Centre, Parks Canada Agency, BC
Peter Ross	Fisheries and Oceans Canada, Marine Environmental Quality Section, BC
Paul Spong	Orcalab, Hanson Island, BC
Andrew Trites	Marine Mammal Research Unit, Fisheries Centre, University of British Columbia, BC
Scott Wallace	(Alternate) Marine Conservation Caucus, Raincoast Conservation Society Sierra Club of Canada, B.C. Chapter, BC

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Gary Wiles	(Alternate) Washington Department of Fish and Wildlife, Marine Mammal Investigations, WA
Rob Williams	Marine Conservation Caucus, Raincoast Conservation Society, BC
Brian Riddell	Fisheries & Oceans Canada, Science Branch, Salmon and Freshwater Ecosystems, BC

Resource Personnel:

Paul Cottrell	Fisheries & Oceans Canada, A/SARA First Nations Coordinator, Treaty & Aboriginal Policy Branch, BC
Carole Eros	Fisheries & Oceans Canada, Species at Risk Recovery Planning Coordinator, Resource Management Pacific Region, BC
Annely Greene	Fisheries & Oceans Canada, Marine Mammal Program Manager, Resource Management Pacific Region, BC
Kathy Heise	Department of Zoology, University of British Columbia, BC
Lara Sloan	Fisheries & Oceans Canada, Communications Officer, Fisheries Management Pacific Region, BC

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Appendix C. Contaminant acronyms

APEs:	Alkylphenol ethoxylates
DBT:	Dibutyltin
DDT:	Dichlorodiphenyl trichloroethane
PAHs:	Persistent aromatic hydrocarbons
PBDEs:	Polybrominated diphenylethers
PBDTs:	Polybrominated trienylethers
PCBs:	Polychlorinated biphenyls
PCDDs:	Dioxins, polychlorinated dibenzo-p-dioxins
PCDFs	Polychlorinated dibenzofurans
PCNs:	Polychlorinated napthalenes
PCPs:	Polychlorinated paraffins
PCTs:	Polychlorinated terphenyls
SPFOs:	Perfluoro-octane sulfonates
POPs:	Persistent organic pollutants
TBT:	Tributyltin

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Appendix D. Description of critical habitat

Southern Resident Killer Whale critical habitat boundaries for transboundary waters of southern Georgia, Haro, and Juan de Fuca Straits. Described clockwise from the western boundary - all Latitudes are Decimal Degrees North; all Longitudes are Decimal Degrees West.

		Start and end coordinates			
	Point description	**Latitude Deg**	**Latitude Min**	**Longitude Deg**	**Longitude Min**
1	Western boundary	48	29.68	124	44.31
2		48	40.02	124	50.68
3	Excluding waters north of the line joining (Sooke Inlet)	48	21.30	123	44.32
4		48	20.33	123	42.90
5	Excluding waters north of the line joining (Royal Roads, Esquimalt Hbr, Victoria Hbr)	48	24.25	123	28.97
6		48	24.57	123	22.61
7	Excluding waters west of the line joining (Cordova Channel and Sidney Channel)	48	29.69	123	18.61
8		48	36.12	123	18.51
9	Excluding waters west of the line joining (western half of Miners Channel and the waters west of Gooch Island)	48	37.04	123	18.49
10		48	39.70	123	17.72
11	Excluding waters west of the line joining (western half of Prevost Channel and Moresby Passage)	48	39.88	123	17.68
12		48	42.96	123	19.63
13	Excluding waters west of the line joining (western portion of Swanson Channel between Moresby Island and Prevost Island)	48	43.34	123	19.88
14		48	48.86	123	22.70
15	Excluding waters west of the line joining (western portion of Trincomali Channel between Prevost Island and Parker Island)	48	50.66	123	23.33
16		48	52.61	123	23.92
17	Excluding waters west of the line joining (western portion of Trincomali Channel between Parker Island and Galiano Island)	48	52.85	123	23.92
18		48	53.08	123	23.76
19	Excluding waters west of the line joining (western portion of southern Strait of Georgia)	48	54.28	123	20.67
20		48	55.39	123	21.98
21		49	0.00	123	18.88
22		49	10.39	123	22.82
23		49	13.58	123	21.97
24	Excluding waters north of the line joining (portion of southern Strait of Georgia)	49	13.58	123	21.97
25		49	14.00	123	21.09
26		49	14.18	123	19.22
27		49	13.79	123	17.21
28	Excluding waters north and east of the line joining (portion of southern Strait of Georgia)	49	13.79	123	17.21
29		49	12.87	123	15.75
30		49	9.01	123	16.48
31		49	3.39	123	9.24
32		49	3.47	123	8.48
	And bounded on the east and south by Point Roberts and the United States Border				

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Northern Resident Killer Whale critical habitat boundaries for Johnstone and southeastern Queen Charlotte Straits. Described clockwise from the western boundary - all Latitudes are Decimal Degrees North; all Longitudes are Decimal Degrees West.

		Start and end coordinates			
	Point Description	**Latitude Deg**	**Latitude Min**	**Longitude Deg**	**Longitude Min**
1	Western boundary (Vancouver Island to Numas Island)	50	36.98	127	11.00
2		50	46.24	127	6.76
3	Northern boundary (Numas Island to Broughton Island)	50	46.27	127	5.26
4		50	46.41	126	48.27
5	Northern boundary (Broughton Island to Screen Island / Eden Island)	50	46.13	126	47.30
6		50	44.95	126	43.55
7	boundary line running from Eden Island to Crib Island (including waters of Queen Charlotte Strait and excluding waters of Trainer Passage)	50	44.79	126	43.22
8		50	43.67	126	42.73
9	boundary line running from Crib Island to House Ilet (including waters of Queen Charlotte Strait and excluding waters of Arrow and Spring Passages)	50	43.33	126	42.58
10		50	40.16	126	41.21
11	boundary line running from House Ilet to Swanson Island (including waters of Queen Charlotte Strait and excluding waters of Knight Inlet)	50	40.16	126	41.21
12		50	37.75	126	43.86
13	boundary line running from Swanson Island to Compton Island (including waters of Blackfish Sound excluding waters of West Passage)	50	36.06	126	41.77
14		50	35.84	126	41.42
15	boundary line running from Compton Island to Harbledown Island (including waters of Blackfish Sound excluding waters of Whitebeach Passage)	50	35.50	126	40.86
16		50	35.38	126	40.68
17	boundary line running from Harbledown Island to Parson Island (including waters of Blackfish Sound excluding waters of Parson Bay)	50	35.19	126	40.93
18		50	34.43	126	40.73
19	boundary line running from Parson Island to West Cracroft Island (including waters of Blackfish Sound excluding waters of Baronet Passage)	50	33.65	126	39.95
20		50	32.98	126	39.73
	Waters of western Johnstone Strait bounded on the north by West Cracroft Island, the mainland, Hardwicke Island and West Thurlow Island with no exclusions except:				
24	boundary line running from West Cracroft Island to the mainland (including waters of western Johnstone Strait excluding waters of Havannah Channel)	50	31.32	126	20.35
25		50	31.09	126	17.05
26	boundary line running from the mainland to Hardwicke Island (including waters of western Johnstone Strait excluding waters of Sunderland Channel)	50	28.46	126	2.54
27		50	26.57	125	57.94
28	boundary line running from Hardwicke Island to Eden Point on West Thurlow Island (including waters of western Johnstone Strait excluding waters of Chancellor Channel)	50	24.58	125	48.29
29		50	23.91	125	47.38
30	boundary line running from Eden Point to Tyee Point on West Thurlow Island (including waters of western Johnstone Strait excluding waters of Vere Cove)	50	23.91	125	47.38
31		50	23.26	125	47.06
32	Eastern boundary line running from West Thurlow Island (including waters of western Johnstone Strait excluding waters of eastern Johnstone Strait and Mayne Passage)	50	23.42	125	34.39
33		50	21.88	125	34.23
	Waters of western Johnstone Strait bounded on the south by Vancouver Island - no exclusions except:				
35	boundary line running from Graveyard Point to Kelsey Bay Harbour on Vancouver Island (including waters of western Johnstone Strait excluding waters of Salmon Bay)	50	23.45	125	56.71
36		50	23.80	125	57.62

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Northern and Southern Resident Killer Whale critical habitat boundaries off Southwestern Vancouver Island. Described counter-clockwise from the northern boundary - all Latitudes are Decimal Degrees North; all Longitudes are Decimal Degrees West.

		Start and end coordinates			
	Point Description	Latitude Deg	Latitude Min	Longitude Deg	Longitude Min
1	Northern Boundary (Vancouver Island running southwest offshore)	48	59.7	-125	40.15
2		48	41.72	-126	17.88
3	Offshore Boundary	48	13.95	-125	44.61
4	Waters adjacent the U.S.A. Border	48	29.72	-124	44.32
5	Waters adjacent Southern Resident Killer Whale critical habitat in transboundary waters of southern Georgia, Haro, and Juan de Fuca Straits	48	40.04	-124	50.66
6	And bounded by Vancouver Island to the Northwest boundary				
7	Excluding waters north of the line joining (Nitinat Inlet)	48	40.05	-124	50.99
8		48	40.13	-124	51.3
9	Excluding waters northeast of the line joining Cape Beale and Amphitrite Point (Barkley Sound)	48	55.22	-125	32.391
10		48	47.174	-125	13.039

Northern Resident Killer Whale critical habitat boundaries in western Dixon Entrance. Described clockwise from the western boundary - all Latitudes are Decimal Degrees North; all Longitudes are Decimal Degrees West.

		Start and end coordinates			
	Point Description	Latitude Deg	Latitude Min	Longitude Deg	Longitude Min
1	Western Boundary (Langara Island Northward)	54	15.38	-133	3.5
2		54	15.99	-133	3.5
3	Northern Boundary	54	16.05	-131	40.45
4	Eastern Boundary	54	9.13	-131	40.43
5	Excluding waters south of line (McIntyre Bay)	54	5.491	-132	15.97
6	Bounded by Graham Island on the Southern Boundary to	54	11.07	-133	1.55
7	Northward to Langara Island, excluding waters west of the line	54	11.43	-133	0.75
8	Bounded on the western Boundary by the eastern side of Langara Island up to Langara Light				
9	Excluding waters south of line (Virago Sound, Naden Harbour)	54	5.86	-132	26.26
10		54	5.57	-132	34.3

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Dozie, Juachi

From: Leslie, Karen
Sent: July-19-18 11:38 AM
To: Murdoch, Sarah
Cc: Webb, Cheryl; Nener, Jennifer; Davis, Neil; Kristensen, Freya
Subject: RE: TRANSITION PLANNING REQUEST: FW: 2018-009-00412 // Response Letter for the DM: Incoming email to DM: Request for input re: Areas for collaboration with BC

Hi Sarah – Based on your comments, please see below.

AREA	DESCRIPTION	TIMELINE/COSTS	ADVANTAGES/DISADVANTAGES
Fisheries and Oceans Canada			
EXAMPLE: Southern Resident Killer Whales (SRKW)	New SRKW Indigenous and Multi-Stakeholder Advisory Group has been recently established and convened with participation from the Province. Mark Zacharias (Ministry of Environment DM) is the provincial representative.	Next meeting on July 30; advisory group will likely meet quarterly, but could be more frequent initially. No additional costs associated with this activity.	

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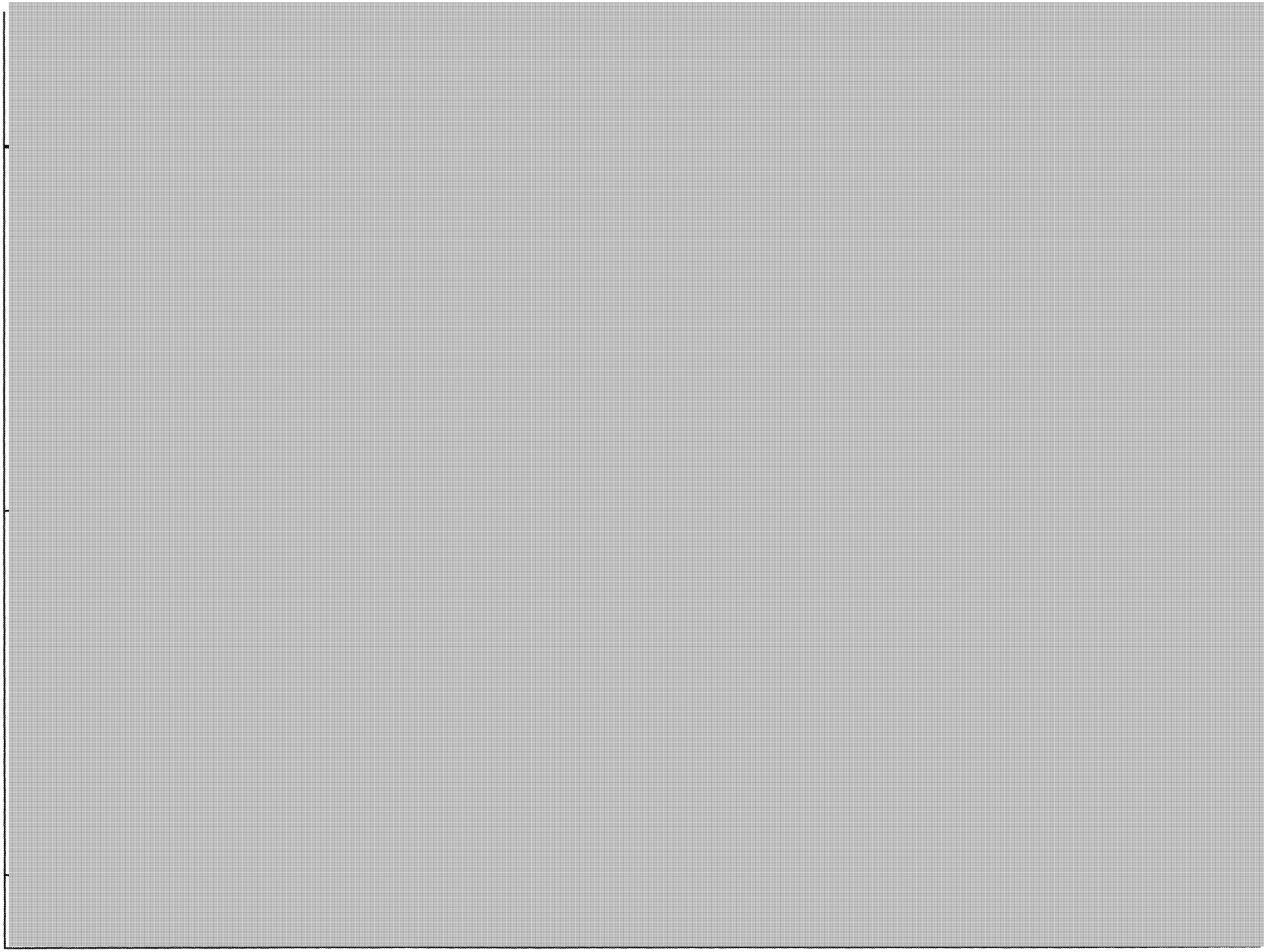

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[redacted]

Karen Leslie
604-666-0395

From: Murdoch, Sarah
Sent: 2018–July-19 10:59 AM
To: Leslie, Karen
Cc: Webb, Cheryl; Nener, Jennifer; Davis, Neil; Kristensen, Freya
Subject: RE: TRANSITION PLANNING REQUEST: FW: 2018-009-00412 // Response Letter for the DM: Incoming email to DM: Request for input re: Areas for collaboration with BC

Thanks Karen, much appreciated. Let Freya or I know if we can help at all.

[redacted]

SM

From: Leslie, Karen
Sent: Thursday, July 19, 2018 9:30 AM
To: Murdoch, Sarah <Sarah.Murdoch@dfo-mpo.gc.ca>

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Cc: Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Nener, Jennifer <Jennifer.Nener@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: RE: TRANSITION PLANNING REQUEST: FW: 2018-009-00412 // Response Letter for the DM: Incoming email to DM: Request for input re: Areas for collaboration with BC

I can work on the SARA components between 11 and 12 this morning

Karen Leslie
604-666-0395

From: Murdoch, Sarah
Sent: 2018–July-19 9:21 AM
To: Harber, Lee; Davis, Neil; Coopper, Tola; Fanos, Brad; Webb, Allison; Payne, Brigid; Martin, Stacee; Nener, Jennifer; Grout, Jeff; Leslie, Karen; Hayes, Trish; Jackson, Corey; Chang, Alison
Cc: Thomson, Andrew; Webb, Cheryl; Smith, Ken; Kristensen, Freya; Lawrie, Kirsten
Subject: RE: TRANSITION PLANNING REQUEST: FW: 2018-009-00412 // Response Letter for the DM: Incoming email to DM: Request for input re: Areas for collaboration with BC
Importance: High

Thanks to many of you for your extremely quick and timely initial responses yesterday afternoon. We now have quite a list, and RDG has had chance to review.

She has requested to add additional rows for the following topics/initiatives. **If you are tagged, please confirm if you will be able to get me the info required by noon today**. Also let me know asap if I have tagged the wrong person for any of these.

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- Other Ongoing SARA (besides SKRW [redacted] which will have their own rows) – **Karen L**

AREA	DESCRIPTION	TIMELINE/COSTS	ADVANTAGES/DISADVANTAGES
Fisheries and Oceans Canada			
EXAMPLE: Southern Resident Killer	New SRKW Indigenous and Multi-Stakeholder Advisory Group has been recently established and convened with participation from the Province. Mark	Next meeting on July 30; advisory group will likely meet quarterly, but could be	[redacted]

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Whales (SRKW)	Zacharias (Ministry of Environment DM) is the provincial representative.	more frequent initially. No additional costs associated with this activity.	[redacted]

Thanks again

Sarah

From: Murdoch, Sarah
Sent: Wednesday, July 18, 2018 12:19 PM
To: Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Coopper, Tola <Tola.Coopper@dfo-mpo.gc.ca>; Fanos, Brad <Brad.Fanos@dfo-mpo.gc.ca>; Webb, Allison <Allison.Webb@dfo-mpo.gc.ca>; Payne, Brigid (Brigid.Payne@dfo-mpo.gc.ca) <Brigid.Payne@dfo-mpo.gc.ca>; Martin, Stacee (Stacee.Martin@dfo-mpo.gc.ca) <Stacee.Martin@dfo-mpo.gc.ca>
Cc: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Smith, Ken <Ken.Smith@dfo-mpo.gc.ca>; Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>; Kristensen, Freya <Freya.Kristensen@dfo-mpo.gc.ca>; MacKenzie, Julia <Julia.MacKenzie@dfo-mpo.gc.ca>; Lawrie, Kirsten <Kirsten.Lawrie@dfo-mpo.gc.ca>
Subject: TRANSITION PLANNING REQUEST: FW: 2018-009-00412 // Response Letter for the DM: Incoming email to DM: Request for input re: Areas for collaboration with BC
Importance: High

Apologies for the COB today request, but Pacific has received a request from Strategic Policy to develop **a short list of 3-4 areas of potential collaboration with BC**, to be sent to the Deputy Minister.

I've identified four proposed areas of potential collaboration [redacted] and looking for input on whether there are other [redacted] that should be added as a fifth:

1) [redacted]
2) SRKW
3) [redacted]

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4) [redacted]
5)
6)

Please briefly identify 1-2 projects under one (or more) of these themes that is already underway or that will begin this summer that involves collaboration with BC. This information should be short - about 4 sentences max and include a description, timeline, costs, and advantages/disadvantages of undertaking the project.

AREA	DESCRIPTION	TIMELINE/COSTS	ADVANTAGES/DISADVANTAGES
Fisheries and Oceans Canada			

Apologies that the timeline on this is tight – **due COB today** – as it needs to be up to Strategic Policy tomorrow.

Thanks and please contact me or Freya Kristensen asap if you have any questions.

Sarah

From: SP-SADMO / BSMAP-PS (DFO/MPO)
Sent: July-18-18 6:47 AM
To: Rajotte, Estelle; Lebel, Mathieu; Church, Ashley
Cc: Mainville, Michel R; Lavell, Shelley; Johal, Sharan; Quinn, Caroline; Hirani, Samia; Belle-Isle, Alain; Domenech, Norma; Williams, Todd
Subject: Re: 2018-009-00412 // Response Letter for the DM: Incoming email to DM: Request for input re: Areas for collaboration with BC

Good morning,

SP has been asked to complete the attached template from PCO, identifying potential areas for collaboration with the province of BC. We would like input from your groups for this request.

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Original incoming from PCO is at the bottom of DMO's tasking.

Please provide your RDG/DC approved input to Norma Domenech by cob tomorrow (July 19) at the latest.

Thanks,

Lindsey

Lindsey Snow
Tel: 613-998-1395
BB: [redacted]

From: D'Angelo, Louise-Anne
Sent: July-18-18 8:56 AM
To: SP-SADMO / BSMAP-PS (DFO/MPO)
Cc: Belle-Isle, Alain; Quinn, Caroline; XNCR-Grp, DMO Correspondence & Briefing Unit
Subject: **NEW TASKING** // 2018-009-00412 // Response Letter for the DM: Incoming email to DM: Request for input re: Areas for collaboration with BC

Good morning,

Please process the following docket for the Deputy Minister:

Title: Incoming email to DM: Request for input re: Areas for collaboration with BC

Lead: SP
Input: N/A

GCCMs#: 2018-009-00412

BF in DMO: Friday, July 20, 2018 (Firm)

Instructions / Supplementary Information: Attached is a table to identify DFO areas of potential additional collaboration with the province. See email below.

Please provide a response letter for the Deputy Minister for the incoming email to DM: Request for input re: Areas for collaboration with BC.

****
If you require an extension or clarification after consulting with your Group's program(s) and/or manager, please email DMO.CBUnit@dfo-mpo.gc.ca
****

Thank you!

Louise Anne D'Angelo

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Receptionist/Correspondence Officer/Receptioniste/ Analyste de la correspondance
Deputy Minister's Office/Bureau du sous-ministre
Fisheries and Oceans Canada/Pêches et Océans Canada
Louise-anne.dangelo@dfo-mpo.gc.ca Tel: 993-2200
From: Wallace, Dorothy
Sent: July-17-18 4:35 PM
To: XNCR-Grp, DMO Correspondence & Briefing Unit
Subject: Tasking: Incoming email to DM: Request for input re: Areas for collaboration with BC

Please task the following:

Title: Incoming email to DM: Request for input re: Areas for collaboration with BC

Deliverable: Response for the Deputy Minister

Lead: SP

Input:

BF in DMO: Friday, July 20, 2018

Instructions / Supplementary Information: Attached is a table to identify DFO areas of potential additional collaboration with the province. See email below.

Thanks,

Dorothy Wallace
Scheduling Coordinator | Coordonnatrice de l'agenda
Office of the Deputy Minister | Bureau de la Sous-ministre
Fisheries and Oceans Canada | Pêches et Océans Canada
200 Kent St, 15S010 Ottawa, ON K1A 0E6
dorothy.wallace@dfo-mpo.gc.ca
Telephone | Téléphone 613-991-4849
Government of Canada | Gouvernement du Canada

From: Wielinga, Anne [mailto:Anne.Wielinga@pco-bcp.gc.ca] **On Behalf Of** Fox, Christiane
Sent: July-17-18 3:28 PM
To: michael.keenan@tc.gc.ca; Blewett, Catherine; Hutchinson, Jeffery; christyne.tremblay@canada.ca; 'Dubuc, Martine (EC)'; stephen.lucas@canada.ca
Cc: Nathalie.G.Drouin@justice.gc.ca; 'Saranchuk, Andrew' (Andrew.Saranchuk@justice.gc.ca); Tapley, Catrina
Subject: Areas for collaboration with BC

s.14

s.21(1)(a)

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Thank you for participating in our call on July 6, during which we took stock of potential areas for additional collaboration with British Columbia.

As I noted, there may be opportunities to profile existing collaboration with British Columbia or undertake additional collaboration later this summer. To that end, I have attached a table for your department to identify areas of potential additional collaboration with the province and we will be working with your officials to populate before circulating a draft.

Please return the table with the portion completed for your department by Tuesday, July 24th. I will circulate the completed table and hold another call to discuss next steps.

Thank you.

Christiane Fox
Deputy Minister of Intergovernmental Affairs and Youth

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Dozie, Juachi

From: Davis, Neil
Sent: August-17-18 9:32 AM
To: Barton, Meagan; Webb, Allison
Cc: Delaney, Paula; Wilkinson, Davida; Khanna, Sukriti; Harber, Lee (Lee.Harber@dfo-mpo.gc.ca)
Subject: RE: URGENT TASKING // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman
Attachments: MECTS-#3953269-v1-MECTS-#3953240-v1-Current_Issues_Deck_-August_2018-SRK....ppt

Hi Meagan,

Lee will be the SME for this.

Lee, this is our chance to insert the edits we were 5 mins late in sending to NHQ yesterday. I believe it is the same deck we saw then, but pls have a look

From: Barton, Meagan
Sent: Friday, August 17, 2018 9:20 AM
To: Webb, Allison <Allison.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Delaney, Paula <Paula.Delaney@dfo-mpo.gc.ca>; Wilkinson, Davida <Davida.Wilkinson@dfo-mpo.gc.ca>; Khanna, Sukriti <Sukriti.Khanna@dfo-mpo.gc.ca>
Subject: FW: URGENT TASKING // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman
Importance: High

Hi Allison and Neil,

The following is **due to the RD FM by 11:00AM today**. Sorry for the short turnaround time. **Would you be able to identify SMEs** for your groups. If this does not belong to you, would you be able to direct me to the right contact and/or if someone else also needs to be added.

Thanks,
Sukriti

for
Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Church, Ashley
Sent: August-17-18 8:40 AM
To: Barton, Meagan
Cc: Lawrie, Kirsten; MacKenzie, Julia; Good, Gaby
Subject: URGENT TASKING // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

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Good morning,

The following docket is for processing for the Minister.

Lead: AE
Input Required From: PAC (FM and Policy) FHM, SP
GCCMS #: 2018-009-00475
Routed to FM and Policy in GCCMS

Information: Please prepare a SN for a meeting with Minister Popham and Heyman taking place Friday, August 24th in Victoria. Note that the SN should cover SRKW and include the attached deck that will be used during the briefing (draft provided earlier by Department),

FM and Policy, Please provide me with your SME's, so that I can pass them onto AE. Also see email from Sarah Murdoch.

BC ones generally always go through Policy, because of cross cutting range of issues, however since Kirsten, Freya and I all away today and topics both FM. Julia will need to be looped in though

Thank you,

Ashley Church
Correspondence Officer | Agente de correspondance
Regional Director General's Office/Bureau Directeur Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Telephone | Téléphone (604) 666-3303
Ashley.Church@dfo-mpo.gc.ca

From: Murdoch, Sarah
Sent: August-17-18 8:27 AM
To: Johal, Sharan; Church, Ashley
Cc: MacKenzie, Julia; Lawrie, Kirsten
Subject: Re: **New Tasking** // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

BC ones generally always go through Policy, because of cross cutting range of issues, however since Kirsten, Freya and I all away today and topics both FM. Julia will need to be looped in though

Hope that's helpful. Off but will have my BlackBerry today

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SM

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Johal, Sharan
Sent: Friday, August 17, 2018 8:17 AM
To: Church, Ashley; Murdoch, Sarah
Subject: RE: **New Tasking** // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

Sarah, given [redacted] SRKW focus… would this be best to flip to Andy and Allison. Would it help to have input coordinated through your shop as well?

Ashley is that 4pm PST or EST?

Let me know what you think!

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: Church, Ashley
Sent: August-17-18 7:36 AM
To: Murdoch, Sarah; Johal, Sharan
Subject: FW: **New Tasking** // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

As requested – Flagging to your attention. Please let me know how to proceed. AE would like to have input to them by 4PM their time.

Ashley Church
Correspondence Officer | Agente de correspondance
Regional Director General's Office/Bureau Directeur Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Telephone | Téléphone (604) 666-3303
Ashley.Church@dfo-mpo.gc.ca

From: D'Angelo, Louise-Anne
Sent: August-17-18 5:54 AM
To: Ahpiang, Melanie; Daspe, Caroline
Cc: Richter, Julie; XNCR-Grp, DMO Correspondence & Briefing Unit; Villeneuve, Anne-Marie; Butcher, Ashley; Johal, Sharan; Kaba, Kyle; Turple, Justin; Belle-Isle, Alain; Church, Ashley; SP-SADMO / BSMAP-PS (DFO/MPO); Kaleta, Michelle; Iacovitti, Michelle; Patrick, Lindsey
Subject: **New Tasking** // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

Good morning,

Please process the following docket for the Minister:

Title: Meeting with Minister Popham and Heyman
Deliverable: Scenario Note for the Minister
Lead: AE

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s.21(1)(a)

s.21(1)(b)

Input: PAC, FHM, SP

GCCMs#: 2018-009-00475

BF in DMO: Monday, August 20, 2018

Instructions / Supplementary Information: Please prepare a SN for a meeting with Minister Popham and Heyman taking place Friday, August 24th in Victoria. Note that the SN should cover SRKW and include the attached deck that will be used during the briefing (draft provided earlier by Department), [redacted] The discussion on [redacted]

****

If you require an extension or clarification after consulting with your Group's program(s) and/or manager, please email DMO.CBUnit@dfo-mpo.gc.ca

****

Thank you!

Louise Anne D'Angelo
Receptionist/Correspondence Officer/Receptioniste/ Analyste de la correspondance
Deputy Minister's Office/Bureau du sous-ministre
Fisheries and Oceans Canada/Pêches et Océans Canada
Louise-anne.dangelo@dfo-mpo.gc.ca Tel: 993-2200

From: Butcher, Ashley
Sent: August-16-18 8:43 PM
To: XNCR-Grp, DMO Correspondence & Briefing Unit
Cc: Richter, Julie; Patrick, Lindsey; Johal, Sharan; Kaba, Kyle
Subject: New Tasking: Meeting with Minister Popham and Heyman

Hello – please assign the following in GCCMS:

Title: Meeting with Minister Popham and Heyman
Deliverable: Scenario Note for the Minister
Lead: AE
Input: PAC, FHM
BF in DMO: August 20, 2018
Instructions / Supplementary Information: Please prepare a SN for a meeting with Minister Popham and Heyman taking place Friday, August 24th in Victoria. Note that the SN should cover SRKW and include the attached deck that will be used during the briefing (draft provided earlier by Department), [redacted] The discussion on [redacted]

Thanks,

Ashley Butcher
A/DA
(613) 947-4561

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Dozie, Juachi

From: MacConnachie, Sean
Sent: July-20-18 8:25 AM
To: Cottrell, Paul; Harber, Lee
Subject: FW: J50 was seen by our US colleagues yesterday

In case you hadn't seen this.

-----Original Message-----
From: Thornton, Sheila
Sent: July-19-18 7:24 PM
To: Lowe, Carmel; Kennedy, Eddy; MacConnachie, Sean
Subject: J50 was seen by our US colleagues yesterday

No sign of the reported carcass.

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch Fisheries and Oceans Canada / Government of Canada Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences Pêches et Océans Canada / Gouvernement du Canada Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

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Wilkinson, Davida

From: Jones, Lisa Ann
Sent: July-23-18 2:39 PM
To: Brekke, Heather
Subject: slide deck for update for SRKW advisory meeting - for your review
Attachments: aRS CH RKW_SRKW Advisory Meeting July 30_2018.pptx

Hi Heather,

Here is the slide deck for your review. I was asked to provide an update on the RKW aRS process that would be 5-7pages max . have kept it to the standard message we had for our meetings but just condensed and added a line on input received from the 30d period.

I note that I just saw the revised draft agenda and there is now 1.5hrs for updates, of which this is topic is 1 of 6 and Cheryl will be presenting it.

Was not sure whether to include the key concerns heard on the slide or leave as a speaking point on the process slide (slide 4)? Also let me know if you think the speaking points below each slide are sufficient to be used by Cheryl or need to be shortened and I can adjust accordingly.

Let me know what you think and I can make necessary changes if you think need more specifics on current status of this process.

Guessing Karen should approve this deck as well.

Cheers
Lisa

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

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Amended Recovery Strategy for Northern & Southern Resident Killer Whales

DFO Species at Risk Program

SRKW Indigenous & Multi-stakeholder Advisory Meeting

July 30, 2018

Canada

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SARA Recovery Documents: Northern and Southern Resident Killer Whales

- 2003 – Northern and Southern Resident Killer Whales listed under Species at Risk Act (SARA).
  - NRKW – Threatened; SRKW – Endangered.
- 2008 - Recovery Strategy (RS) finalized.
  - Amended in 2011 to further describe & protect Critical Habitat (CH).
- 2017 - Action Plan finalized.
  - Identified 98 Recovery Measures to address threats and recover both populations
  - Includes measures to identify additional CH areas for designation and protection.

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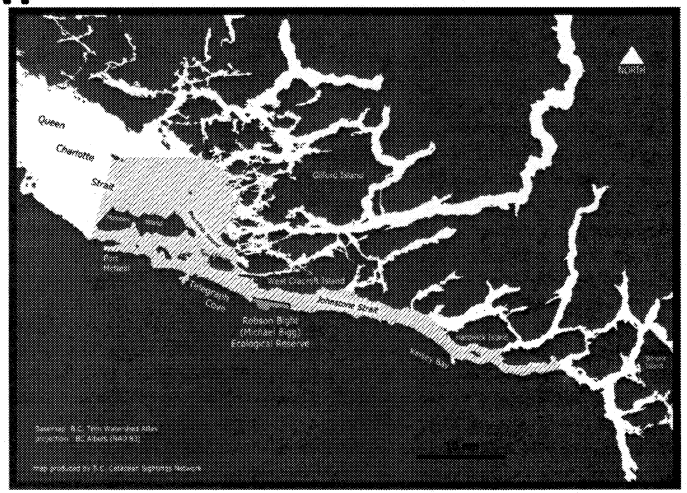
Critical Habitat (CH)

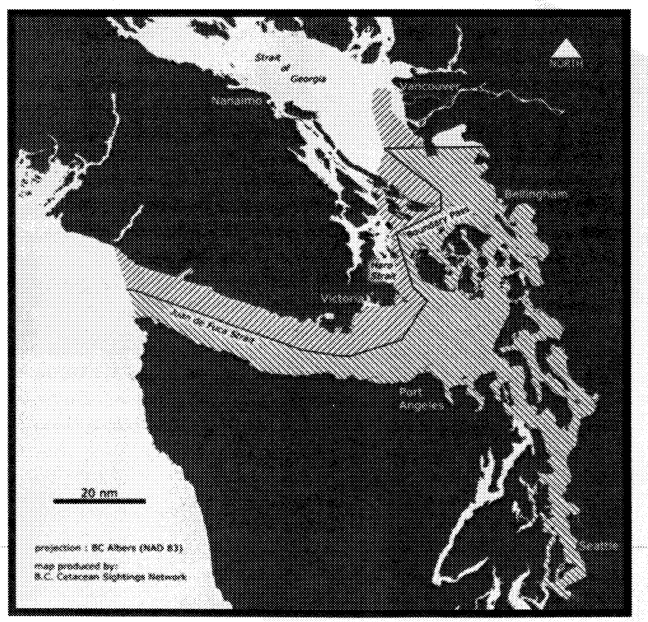
- Habitat necessary for survival or recovery of a listed wildlife species.
- Species at Risk Act (SARA) requires that CH be identified to the extent possible for all endangered, threatened and extirpated species.
- Partial CH for Northern (NRKW) and Southern (SRKW) Resident Killer Whales was identified in the SARA 2008 Recovery Strategy (RS) and protected under Critical Habitat Order in 2009.

Existing RKW Critical Habitat

NRKW



SRKW



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SARA RKW Recovery Strategy Amendment

Process:

- New science advice (DFO Science Advisory Report 2017/011)
- CH must be included in a recovery strategy or action plan for the species.
- Amendment to RKW RS to incorporate CH revisions.
- 30-day external review of draft Amended RS (June 12 – July 11, 2018)
  - 670 online responses submitted; 22 letters received
- 60-day public comment period of proposed Amended RS (August 2018).
- Final Amended RS posted to public registry (anticipated by end of 2018).
- Within 180 days – legal protection of CH via Critical Habitat Order (CHO).

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SARA RKW Recovery Strategy Amendment

RKW RS amendment:

- Identifies two additional areas for consideration as CH:
  - waters of western Dixon Entrance along the north coast of Graham Island from Langara Island to Rose Spit (NRKW)
  - waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (NRKW and SRKW)

- Clarifications to all CH for RKW (features, functions, attributes).

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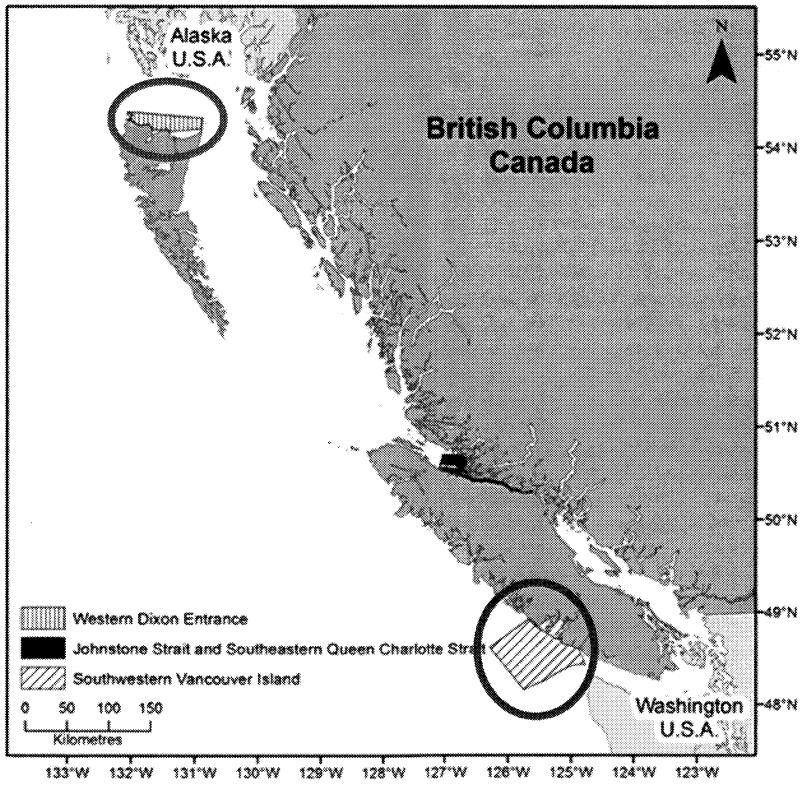
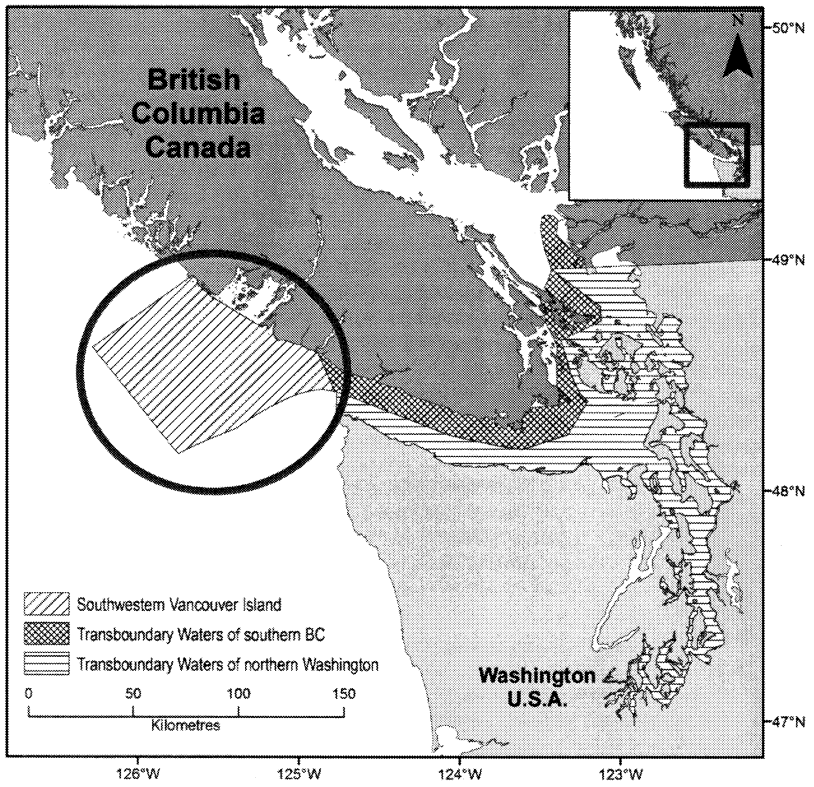
SARA RKW Recovery Strategy Amendment

- Two additional areas identified for consideration as CH

NRKW



SRKW



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SARA RKW Recovery Strategy Amendment

- CH legal protection process
  - Existing RKW CH is protected under a Critical Habitat Order (CHO).
  - Anticipated that additional RKW CH will also be legally protected under a CHO.

- A CHO prohibits destruction of features, functions, attributes of identified CH
  - RS provides examples of human activities likely to destroy CH if unmitigated.
  - Activities are not automatically prohibited.

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For more information please contact

SARA.XPAC@dfo-mpo.gc.ca

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Background slides for discussion/ further information

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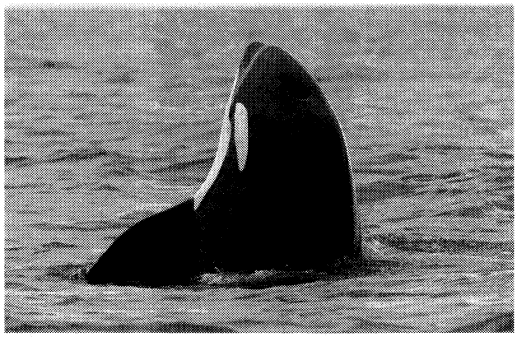
SARA RKW Recovery Strategy Amendment



- Provides clarification of the functions, features and attributes for all CH identified for NRKW and SRKW
  - Features/attributes:
    - Availability of prey;
    - Acoustic environment;
    - Water quality;
    - Physical space around whales (200m); and
    - For NRKW: suitable physical habitat to allow for beach rubbing behaviour.
  - Applies to both existing and the two additional proposed areas.

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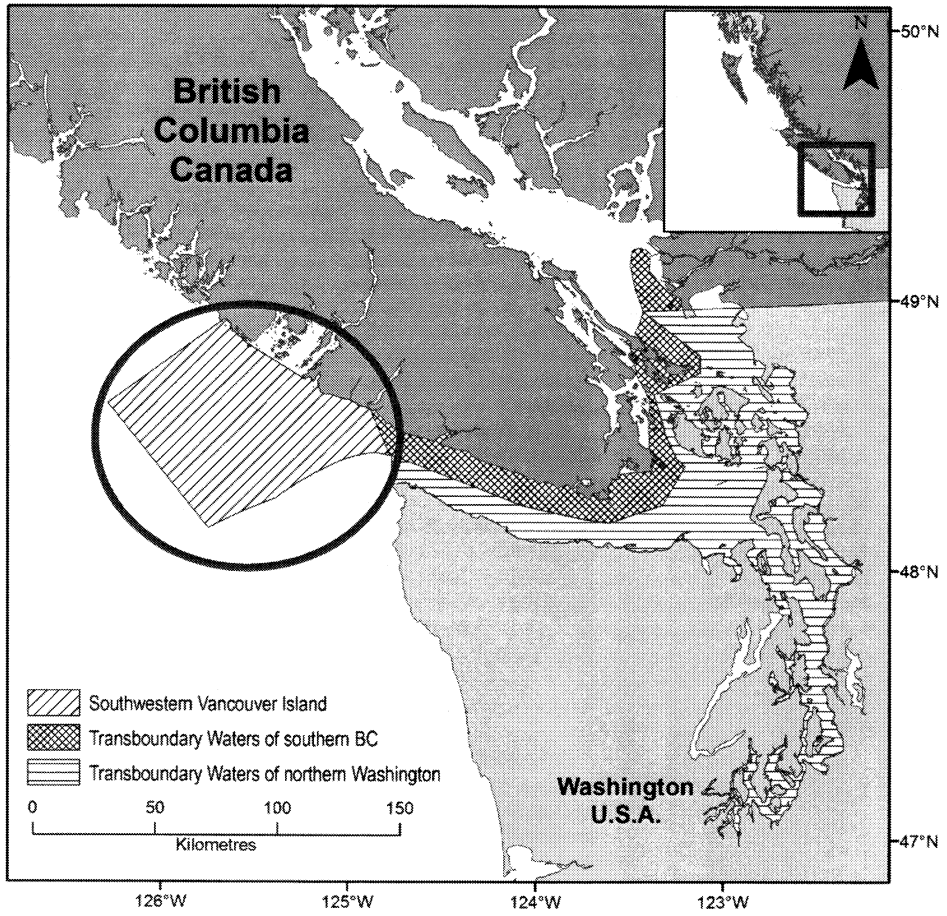
Southwestern Vancouver Island

- Vessel surveys, passive acoustic monitoring (Aug. 1 2009 to July 31, 2011).
- Used throughout the year by SRKW and NRKW
- A primary habitat used by SRKW during May-September when they are outside existing CH area.
- 201 predation events, 88% Chinook.



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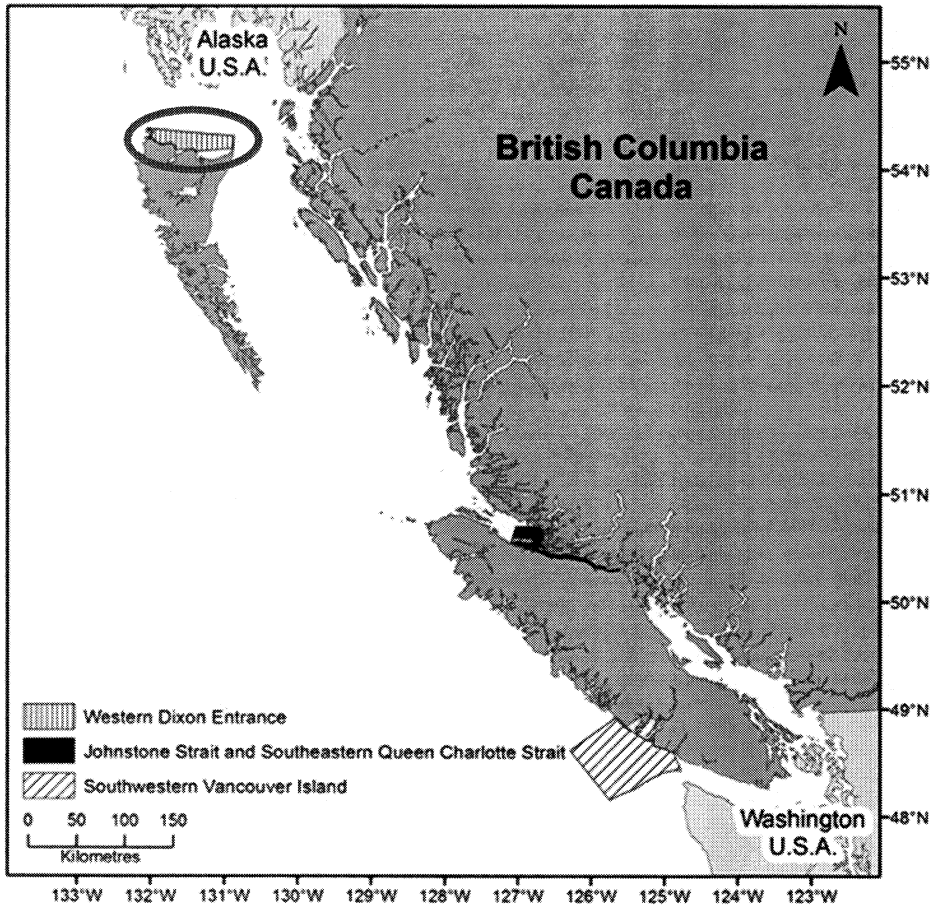
Western Dixon Entrance

- Vessel surveys, passive acoustic monitoring (2009-2012).
- Used year-round by NRKW, especially late winter and spring.
- Used by members of NRKW population that rarely use existing CH.
- 80 predation events, all but one were Chinook.



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Wong, Eva

From: Jones, Lisa Ann
Sent: July-23-18 2:40 PM
To: Brekke, Heather
Subject: FW: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS
Attachments: Draft Agenda for July 30 mtgV5.docx; SRKW Indigenous and Multi-stakeholder Advisory Group DRAFT TOR V8.docx

FYI – ToR and draft agenda for the July 30 meeting

From: Harber, Lee
Sent: July-23-18 12:50 PM
To: Jones, Lisa Ann
Subject: FW: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

FYI latest versions – will keep you posted post check with RDG at 2PM.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: (613) 797-5146

From: Harber, Lee
Sent: 2018–July-23 12:41 PM
To: Thomson, Andrew
Cc: Davis, Neil
Subject: RE: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

Hi Andy,

Updated Agenda and ToR as per direction from ADM call this morning. Will also get follow-up letter going today.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

From: Thomson, Andrew
Sent: 2018–July-23 10:47 AM
To: Harber, Lee; Moore, Kendra
Cc: Davis, Neil; Webb, Cheryl
Subject: Re: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

when we send the invite out - we will ask the invitees if they have any items they want to bring up at the update portion.

Add the science piece back in to the updates section

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Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Harber, Lee
Sent: Monday, July 23, 2018 10:43 AM
To: Thomson, Andrew; Burns, Adam; Jenkins, Randy; Moore, Kendra
Cc: Davis, Neil; Webb, Cheryl
Subject: RE: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

Ok will do.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

From: Thomson, Andrew
Sent: 2018–July-23 10:43 AM
To: Harber, Lee; Burns, Adam; Jenkins, Randy; Moore, Kendra
Cc: Davis, Neil; Webb, Cheryl
Subject: Re: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

On the TOR

Take out the Purpose section

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Harber, Lee
Sent: Monday, July 23, 2018 10:02 AM
To: Burns, Adam; Jenkins, Randy; Moore, Kendra
Cc: Thomson, Andrew; Davis, Neil; Webb, Cheryl
Subject: FW: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

Hi Adam,

Just an FYI, attached draft materials for upcoming SRKW Advisory Group meeting on July 30 are being shared with ADMs via Natasha Rascanin today. Neil will raise this for brief discussion on the NHQ-PAC call later today.

Please let us know if you have any questions.

Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Sanders , Michelle [mailto:michelle.sanders@tc.gc.ca]
Sent: 2018–July-22 7:36 PM
To: Webb, Cheryl; Thomson, Andrew; Myers, Yvette; gwen.goodier@canada.ca
Cc: Harber, Lee; 'mary-ann.spicer@canada.ca'; Henneman, Sonja; Winfield, Nicholas
Subject: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

All,
Attached are the versions that Natasha will be sending out to ADMs. As flagged earlier today, she asked that we remove the Purpose clause in the ToRs as she found it redundant with the Objectives, and felt it took it a little further than she was comfortable with re "recommendations". If you feel strongly about having the purpose clause in there I would flag it to your respective ADMs to raise on the call on Monday. That is the only substantive change. Otherwise these should reflect our discussions on Friday.

Thanks,
Michelle

Michelle Sanders
A/DG, Environmental Policy /
DG p.i, Politiques environnementales
613-949-2753 (w) / [redacted] (bb)

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SOUTHERN RESIDENT KILLER WHALES
INDIGENOUS AND MULTI-STAKEHOLDER ADVISORY GROUP

AGENDA – [Internal - Annotated]

Monday July 30, 2018 9:30 am- 12:30 pm
Location: 401 Burrard St. Room
2nd Floor, Boardroom C and D

Time	Agenda Item	Objective & Materials	Presenter(s)
9:30AM – 9:45AM *(15 mins)*	**Welcome, Opening Remarks & Introductions** • Opening Remarks • Review Agenda • Ratify Summary Report from first meeting	Materials: 1. Draft Agenda 2. Speaking points	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region
9:45AM-10:45AM *(1 hour)*	**Review draft Terms of Reference** **Discuss Forward Agenda** Areas for consideration: 1. Compliance with recovery Measures 2. Setting Targets (short & long term) 3. Updates from federal departments on measures being implemented to address key threats (DFO/TC/ECCC) 4. Other areas of interest identified by participants	Objective: Review draft Terms of Reference & discussion a priority areas for discussion in supporting the establishment of a forward agenda Materials: 1. Draft Term of Reference	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region Discussion with input from all participants
10:45AM-12:15PM *(1.5 hours)*	**Updates / Recent Developments** 1. Update on amended Marine Mammal regulations 2. Update on New Critical Habitat under Amended RKW recovery strategy 3. Lateral Displacement in Strait of Juan de Fuca / Vessel Slow Down in Haro Strait 4. Science Activities 5. Other updates (non-federal) 6. Opportunity for participants to provide other updates.	Materials: 1. PowerPoint Presentations with Speaking Point Presenters on each of the updates. [will not be shared with participants] 2. Hand-out's on updates (as required)	Update 1: Andy Thomson, Regional Director, Fisheries Management, DFO Update 2: Cheryl Webb, Regional Director, Ecosystem Management, DFO Update 3: Michelle Sanders, A/Regional Director General, Environmental Policy, TC and ECHO Update 4: Carmel Lowe, Regional Director, Science, DFO
12:15AM – 12:30PM *(15 mins)*	**Closing Remarks** ○ Next Steps ○ Action Items	Objectives: Identify next steps & action items	**Chair: Rebecca Reid** Regional Director General, DFO – Pacific Region

s.21(1)(a) s.23
s.21(1)(b)
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Dozie, Juachi

From: Brekke, Heather
Sent: July-23-18 2:37 PM
To: Ko, Christina; Fershau, Jonathan
Cc: Leslie, Karen
Subject: RE: UPDATE: Heads up - Resident Killer Whale briefing note
Attachments: MECTS-#3939256-v1-MEMO_-_Regional_Approval_of_the_Proposed_Amended_Recovery_Strategy_for_the_Northern_and_Southern_RKW_Jul2318.docx

Hi Christina,

Please note we (myself, Neil Davis, and Karen) have made a change to the BN – see tracked changes attached,

Can you please update the BN in the system, and notify signatories as appropriate?

Thanks
Heather

From: Ko, Christina
Sent: July-19-18 2:42 PM
To: Fershau, Jonathan
Cc: Brekke, Heather; Leslie, Karen
Subject: RE: UPDATE: Heads up - Resident Killer Whale briefing note

Hi Jonathan

As per your request, please see attachments

Regards,
Christina Ko

Administration Assistant, Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Christina.Ko@dfo-mpo.gc.ca / Tel: 604-666-2774 / Fax: 604-666-0417

Administration, Gestion des ecosystems
Pêches et Océans Canada / Gouvernement du Canada
Christina.Ko@dfo-mpo.gc.ca /Tél: 604-666-2774 / Telecopieur: 604-666-0417

Fisheries and Oceans Canada | Pêches et Océans Canada

From: Fershau, Jonathan
Sent: Thursday, July 19, 2018 2:29 PM
To: Ko, Christina
Cc: Brekke, Heather; Leslie, Karen
Subject: RE: UPDATE: Heads up - Resident Killer Whale briefing note

Hi Christina,

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Thanks for your assistance. Could you please send me the formatted word documents you entered in the system (i.e, with the GCCMS / EKME numbers entered).

Heather/Karen: I have confirmed with Mark that we're sending the note around to the approvers list first before Cheryl signs off.

jf

From: Ko, Christina
Sent: July-19-18 2:23 PM
To: Fershau, Jonathan
Cc: Brekke, Heather; Leslie, Karen
Subject: UPDATE: Heads up - Resident Killer Whale briefing note

Hi Jonathan,
I forgot to update you earlier. I've already entered them in and printed them out for Cheryl's approval. It's now with her.

Regards,
Christina Ko

Administration Assistant, Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Christina.Ko@dfo-mpo.gc.ca / Tel: 604-666-2774 / Fax: 604-666-0417

Administration, Gestion des ecosystems
Pêches et Océans Canada / Gouvernement du Canada
Christina.Ko@dfo-mpo.gc.ca /Tél: 604-666-2774 / Telecopieur: 604-666-0417

Fisheries and Oceans Canada | Pêches et Océans Canada

From: Fershau, Jonathan
Sent: Wednesday, July 18, 2018 4:25 PM
To: Ko, Christina
Cc: Brekke, Heather; Leslie, Karen
Subject: Heads up - Resident Killer Whale briefing note

Hi Christina,
I gather you are acting as the Species at Risk administrative cover for this week.
As a heads up: there will be a briefing note coming to you tomorrow...either from myself or from Heather Brekke (in Resource Management) for entry in to GCCMS. This is an urgent note that will be coming from the resource management SARA team, through Karen Leslie. Cheryl will be the note's sponsor, with additional approvals from Neil Davis and Andrew Thompson required..

Once the note is in the system, I'll need daily updates on the note's progress though the system. We're looking to have the note signed by the RDG by July 26.

Happy to walk you through this tomorrow.

Jonathan

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Jonathan Fershau
Regional Coordinator – Species at Risk
Fisheries and Oceans Canada/Pêches et Océans Canada
200-401 rue Burrard Street
Vancouver BC / C-B V6C 3S4
Tel: 604-666-2344
e-mail/courriel: Jonathan.Fershau@dfo-mpo.gc.ca

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Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region | Région du Pacifique

Regional Director General | Directrice générale régionale

UNCLASSIFIED
2018-505-00063
EKME # 3939256

MEMORANDUM FOR THE REGIONAL DIRECTOR GENERAL, PACIFIC

REGIONAL APPROVAL OF THE PROPOSED AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE
(FOR DECISION)

SUMMARY OF ADVICE TO THE REGIONAL DIRECTOR GENERAL

The purpose of this note is to seek your approval to submit, jointly with the Parks Canada Agency, the proposed *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada* for consideration to publish it for a 60-day national public comment period on the Species at Risk Public Registry.

The proposed Amended Recovery Strategy (aRS) incorporates two additional areas of special importance to be identified as critical habitat (CH): the waters off southwestern Vancouver Island and waters of west Dixon Entrance. The document also provides clarification of the functions, features, and attributes for both current and additional CH.

The Pacific region conducted a 30-day online external review on the draft aRS from June 12 – July 11, 2018. Based on feedback received, a minor change was incorporated.

Interest in the proposed aRS is anticipated to be high due to the finding that Southern Resident Killer Whales face imminent threats to their survival and recovery, concerns raised that the expedited consultation timeline does not allow for meaningful consultation, and concern that the designated CH would result in immediate fishing closures.

Your approval is sought by **July 26, 2018** so the proposed document can be posted for a 60-day national online public comment period by August 20, 2018.

BACKGROUND

Northern and Southern Resident Killer Whales (NRKW and SRKW) are listed on Schedule I of the Species at Risk Act (SARA) as Threatened and Endangered, respectively. The Minister of Fisheries and Oceans and the Minister responsible for the Parks Canada Agency (PCA) are the competent ministers under SARA for this species.

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s.21(1)(b)

The *Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada* was finalized in 2008 and identified two areas of partial critical habitat (CH), which was legally protected by SARA Critical Habitat Order (CHO) in 2009. A schedule of studies was included in the 2008 Recovery Strategy to further identify CH areas. In 2011, minor amendments were made to clarify the attributes of the CH section.

In the current proposed aRS (Attachment 1), the CH section (Section 7) was updated to identify two additional areas as proposed CH, as identified in a recent science advice report (CSAS SAR 2017/011): 1) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (important for both NRKW and SRKW); and 2) waters of west Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit (important for NRKW). Further, it provides additional clarification of the functions, features, and attributes for both new and existing CH. This identification of CH adheres to the *Guidelines for the Identification of Critical Habitat for Aquatic Species at Risk* (2015).

Under SARA, recovery strategies must be developed in cooperation and consultation with potentially affected groups and individuals. Species at Risk (SAR) policy direction is to address this requirement via a 30-day regional external review, which for this document occurred from June 12 to July 11, 2018. During this time, teleconference meetings were held with Indigenous groups, local and regional government representatives, and stakeholders to clarify the process and implications of CH identification and protection. All feedback from this regional external review was considered but did not result in substantive changes to the document (Attachment 2). One minor change was made to clarify the description of the attribute for acoustic environment in Table 4 (p. 63).

The next step is to send the document for Minister approval for posting as a Proposed aRS for a 60-day national public comment period on the SAR Public Registry. This comment period is expected to start August 20, 2018.

STRATEGIC CONSIDERATIONS

Ecojustice filed a petition to the Minister of Fisheries and Oceans and the Minister of Environment and Climate Change Canada on January 30, 2018 seeking immediate action for an emergency protection order (EPO) for SRKW under s.80 of SARA to address the key threats and included a request to designate additional CH. The area identified in the petition is the same as that proposed CH off southwest Vancouver Island described in the aRS.

On May 24, 2018, the Ministers issued a news release stating that the SRKW is facing imminent threat to their survival and recovery. Subsequently, the Ministers must recommend Cabinet make an EPO for SRKW, which may include identification of CH. However, this recommendation is not required if the Ministers are of the opinion equivalent measures under other Acts of Parliament are in place. An assessment of equivalent measures is underway.

The timeline for posting the Final aRS on the SAR Public Registry is by December 2018.

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[redacted] The timeline for the aRS has been communicated to Ecojustice, insofar as to say the 60-day national public comment period is anticipated to start in late August.

Recreational fishers expressed significant concern regarding the timelines for review coinciding with their fishing season as well as concern that creation of new areas of CH will lead to further fisheries restrictions. These concerns have prompted attention from the media, the premier of BC, and local elected officials. There have been ongoing and repeated demands to extend the external review and push back the start of the 60-day comment period to later in the fall. [redacted]

Further, some opinions were expressed that there is insufficient science to support the new proposed CH areas, most notably for La Pérouse Bank. However, the science advice (CSAS SAR 2017/011) describes that there is extensive data to support the importance of Swiftsure Bank and western Dixon Entrance to RKW. While there are fewer data to support La Pérouse, both populations are known to use the area, including over winter, and the area is known to be a highly productive salmon habitat where foraging events have been documented for both populations.

[redacted]

SCIENCE ADVICE

In 2017, a Canadian Science Advisory Secretariat (CSAS) Science Advisory Report was published that identified two additional areas of special importance for RKW and provides a description of the functions, features, and attributes of the proposed additions to RKW CH and examples of human activities likely to destroy CH (CSAS SAR 2017/011).

INTERDEPARTMENTAL CONSULTATIONS

The proposed aRS was developed cooperatively with the PCA, with input sought from Environment and Climate Change Canada, the Department of National Defence (DND), Transport Canada, the Department of Natural Resources, the province of BC, and U.S. National Oceanic and Atmospheric Administration and Washington Department of Fish and Wildlife. Favourable input was received from DND. The province of BC provided a response letter after the review period closed expressing support of CH identification but require a socio-economic analysis and full consultation in order to support it for legal habitat protection..

INDIGENOUS CONSULTATIONS

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Input was sought from coastal Indigenous groups (122) and and four Wildlife Management Boards (Maa-nulth, Tla'amin, Tsawwassen, and Nisga'a Wildlife Management Board / Nisga'a Lisims Government). Letters, e-mails, and faxes were sent to these groups two weeks prior to and at the start of the external review, and included the opportunity of a meeting via phone or in-person where requested. Teleconferences were held with the Pacheedaht and Ditidaht First Nations. Additionally, members from Nuu-chah-nulth participated on a call with West Coast Aquatic. Several emails and letters were received, primarily expressing concern over perceived implications to Treaty Fishing Rights, potential implications to fishing activities, and that further meaningful consultation is required.

EXTERNAL CONSULTATIONS

E-mails were sent to stakeholders (211) and other government agencies (19), and information circulated to advisory boards. Approximately 690 responses were received, the majority of which were from the recreational fishing sector, and local and regional government representatives, including the Premier of BC, expressing concerns over timelines for consultation, implication of future management measures, and science advice used to identify CH. Pacific region is developing a plan with the Sport Fishing Advisory Board for supporting their participation in the next phase of consultation on the proposed amendments. Vancouver Fraser Port Authority and the Chamber of Shipping both expressed support, but requested clarification of CH thresholds and values. Ecojustice expressed concern over the timeline and the approach used to identify CH.

ADVICE AND RECOMMENDATIONS TO REGIONAL DIRECTOR, ECOSYSTEM MANAGEMENT BRANCH

It is recommended that the proposed *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada* be approved for submission to National Headquarters for consideration to publish it on the SAR Public Registry for a 60-day online national public comment period.

_____

Cheryl Webb
Regional Director
Ecosystems Management Branch

☐ I concur with the recommendations

☐ I do not concur with the recommendations

_____

Rebecca Reid
Regional Director General
Pacific Region

.../5

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Attachment(s): (2)

1) Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada [PROPOSED]
2) Consultation Summary: External Review of the Draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada*

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Fisheries and Oceans Canada | Fiche d'acheminement de correspondance
Correspondence Routing Slip | Pêches et Océans Canada

UNCLASSIFIED
GCCMS # : 2018-505-00063
EKME # : 3939256

To: / Pour: Rebecca Reid Date:

Object: / Objet: **REGIONAL APPROVAL OF THE PROPOSED AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE**

From / De: Cheryl Webb, Regional Director, Ecosystems Management Branch

Additional Approvals:
Autre(s) approbation(s):

☐	Material for the Minister Documents pour le Ministre	X	Your Signature Votre signature	☐	Information

Screen: / Filtre:

The Department has assessed this issue in full.

- ☒ It contains no reference to matters covered by the screen relating to J.D. Irving Limited.
- ☐ It contains matters referenced in the screen relating to J.D. Irving Limited, but in our view does not engage the screen.
- ☐ In our view, the screen relating to J.D. Irving Limited should be engaged.

Remarks: / Remarques: This briefing note was developed in consultation with the following regions/sectors:

Neil Davis, Director, Resource Management

Carmel Lowe, Regional Director, Science

Andrew Thomson, Regional Director, Fisheries Management

Distribution:

Drafting Officer/ Rédacteur: LISA JONES (604-666-2792) / Cheryl Webb / ck

s.16(2)
s.19(1)
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Wong, Eva

From: Knight, Melanie [redacted]
Sent: July-23-18 9:31 AM
To: Robinson, Orla
Subject: ECHO AWG Meeting Summary and DOODLE POLL
Attachments: ECHO AWG Meeting Summary - June 12 2018.pdf

Hello Advisory Working Group members,

Please see the attached meeting summary from our meeting from June 12, 2018. The PDF's of all the power point presentations are saved on our FTP site. To access them, click here and you the login info below:

- FTP case-sensitive login: [redacted]
- FTP password: [redacted]

If you have any questions or comments, please let us know.

Doodle poll for next meeting
Please fill out the doodle poll for our next AWG meeting. For those of you who cannot access outside links, please reply back with your availability for all of the following dates:

- Tuesday October 2
- Wednesday October 3
- Tuesday October 9
- Wednesday October 10

Meeting will be held downtown Vancouver at the Metropolitan Hotel, from 8:00am – 3:00pm.

Slowdown is now on
As you know, SRKWs were spotted in Haro Strait on Thursday July 12. Look out for the newsletter coming out tomorrow with week one participation rates – which look promising!

New literature review paper about noise reduction mitigations now available
A new paper has been published in the *Marine Pollution Bulletin* by Rob Williams et al which has reviewed the literature to provide a qualitative description of mitigation approaches. They used the Lime Kiln hydrophone data set of existing ship source levels to quantify how some mitigation approaches could readily reduce noise levels by 3–10 dB. Please see the FTP site to access the paper.

Whales in the news
Orcas of the Pacific Northwest are starving and disappearing (The New York Times) – Discusses the threats to endangered Southern Resident killer whales, including declines in Chinook Salmon. Washington State Governor's opposition of Kinder Morgan's Trans Mountain Pipeline expansion is mentioned, that would significantly increase oil tanker traffic in that whale's habitat. Commercial traffic and noise in Haro Strait is also mentioned.

Vancouver Island towns fearful over fishing closures (Vancouver Sun/Victoria Times Colonist) – An invitation from Fisheries and Oceans Canada to discuss ocean areas that might be critical for killer whales has outraged community leaders from southwest Vancouver Island, who are opposed to the closing, which, they say, would devastate the small towns that rely on sport fishing to attract tourists.

Lloyd's List Environmental Award
We didn't bring the award to the AWG meeting for you all to see but here is a picture of it displayed proudly at the Port offices.

s.21(1)(a)
s.21(1)(b)
s.23

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Khanna, Sukriti

From: Brekke, Heather
Sent: July-23-18 9:00 AM
To: Jones, Lisa Ann
Subject: [redacted]
Attachments:

Fyi, for consideration for the other response.

From: Leslie, Karen
Sent: July-23-18 8:55 AM
To: Brekke, Heather
Subject: FW: [redacted]

Just FYI

Karen Leslie
604-666-0395

From: Legault, Josée [mailto:Josee.Legault@justice.gc.ca]
Sent: 2018–July-23 8:50 AM
To: Busby, Corina; Leslie, Karen
Cc: Thorleifson, Erika; Beaton, Heather (DOJ)
Subject: RE: [redacted]

Hi again,

[redacted] Thanks.

Josée

From: Legault, Josée
Sent: Monday, July 23, 2018 11:12 AM
To: 'Busby, Corina' <Corina.Busby@dfo-mpo.gc.ca>; Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Cc: Thorleifson, Erika <Erika.Thorleifson@dfo-mpo.gc.ca>; Beaton, Heather <Heather.Beaton@justice.gc.ca>
Subject: RE: [redacted]

Hi Corina,

[redacted]

Josée

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Josée Legault

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Avocate générale / General Counsel
Ministère de la Justice du Canada / Department of Justice Canada
Services juridiques / Legal Services
Pêches et Océans Canada - Fisheries and Oceans Canada
200 Kent, Ottawa K1A 0E6
Tél. / tel.: (613) 990-2291
Téléc. / fax: (613) 990-9385
Josée.Legault@justice.gc.ca

From: Busby, Corina [mailto:Corina.Busby@dfo-mpo.gc.ca]
Sent: Monday, July 23, 2018 9:25 AM
To: Legault, Josée <Josee.Legault@justice.gc.ca>; Sanders , Michelle (michelle.sanders@tc.gc.ca) <michelle.sanders@tc.gc.ca>; Goodier, Gwen (EC) (gwen.goodier@canada.ca) <gwen.goodier@canada.ca>; mary-ann.spicer@canada.ca; Roberts, MaryJane (EC) (maryjane.roberts@canada.ca) <maryjane.roberts@canada.ca>; Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; tamaini.snaith@pc.gc.ca
Cc: Thorleifson, Erika <Erika.Thorleifson@dfo-mpo.gc.ca>
Subject:
Importance: High

Hi All,

Thanks,

Corina

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s.21(1)(a)

s.21(1)(b)

s.23

Fisheries and Oceans
Canada

Regional Director General
Pacific Region
Suite 200 – 401 Burrard Street
Vancouver, British Columbia
V6C 3S4

Pêches et Océans
Canada

Directrice générale régionale
Région du Pacifique
Piéce 200 – 401 rue Burrard
Vancouver C.-B.
V6C 3S4

Your file *Votre reference*
Our file *Notre reference*
2018-501-00076

[redacted]

Canada

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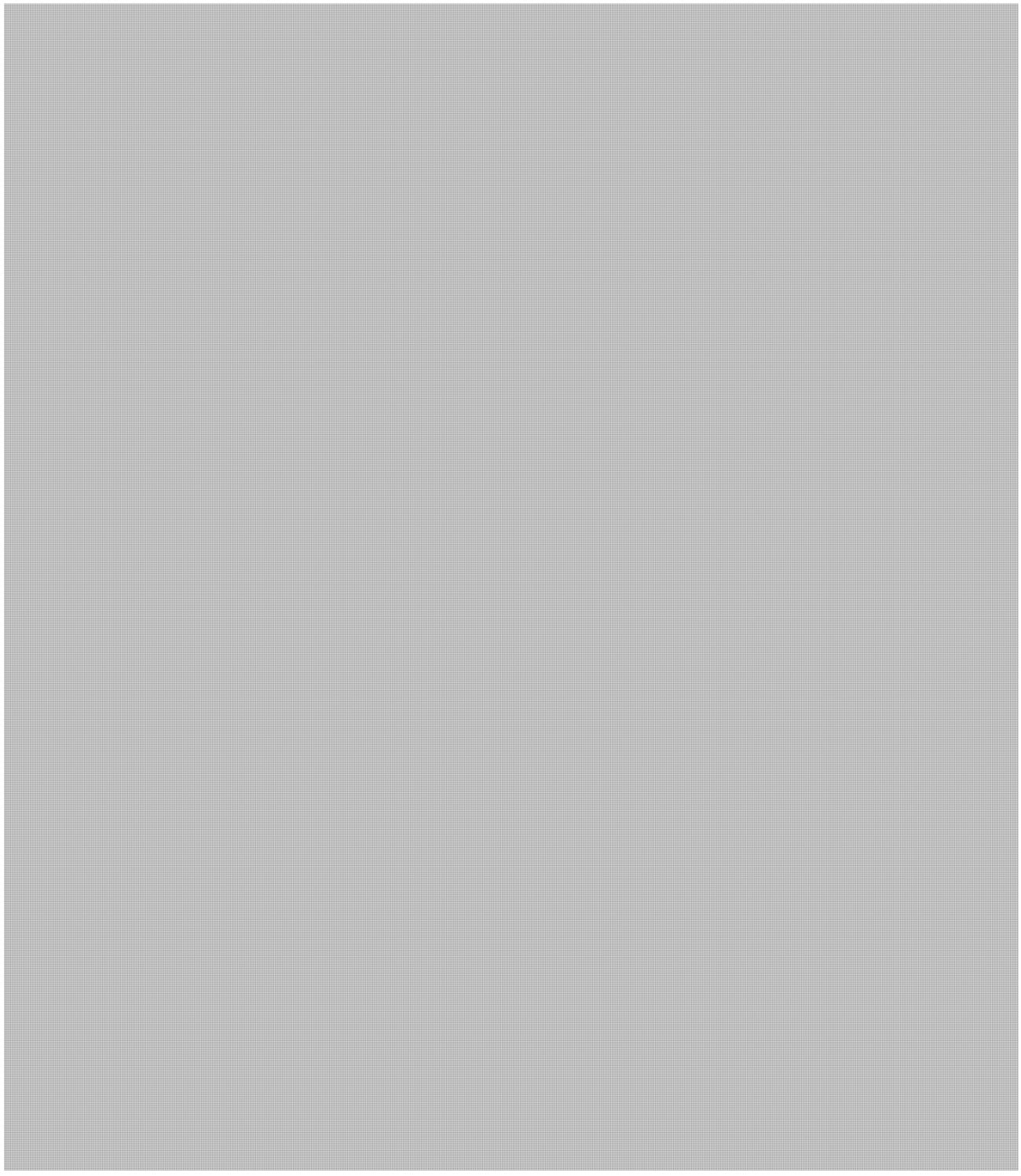

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Wong, Eva

From: Leslie, Karen
Sent: July-23-18 8:55 AM
To: Brekke, Heather
Subject: [redacted]
Attachments:

Just FYI

Karen Leslie
604-666-0395

From: Legault, Josée [mailto:Josee.Legault@justice.gc.ca]
Sent: 2018–July-23 8:50 AM
To: Busby, Corina; Leslie, Karen
Cc: Thorleifson, Erika; Beaton, Heather (DOJ)
Subject: RE: [redacted]

Hi again,

[redacted] Thanks.

Josée

From: Legault, Josée
Sent: Monday, July 23, 2018 11:12 AM
To: 'Busby, Corina' <Corina.Busby@dfo-mpo.gc.ca>; Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Cc: Thorleifson, Erika <Erika.Thorleifson@dfo-mpo.gc.ca>; Beaton, Heather <Heather.Beaton@justice.gc.ca>
Subject: RE: [redacted]

Hi Corina,

[redacted]

Josée

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Josée Legault
Avocate générale / General Counsel
Ministère de la Justice du Canada / Department of Justice Canada
Services juridiques / Legal Services
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200 Kent, Ottawa K1A 0E6
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Téléc. / fax: (613) 990-9385
Josée.Legault@justice.gc.ca

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Busby, Corina [mailto:Corina.Busby@dfo-mpo.gc.ca]
Sent: Monday, July 23, 2018 9:25 AM
To: Legault, Josée <Josee.Legault@justice.gc.ca>; Sanders , Michelle (michelle.sanders@tc.gc.ca) <michelle.sanders@tc.gc.ca>; Goodier, Gwen (EC) (gwen.goodier@canada.ca) <gwen.goodier@canada.ca>; mary-ann.spicer@canada.ca; Roberts, MaryJane (EC) (maryjane.roberts@canada.ca) <maryjane.roberts@canada.ca>; Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; tamaini.snaith@pc.gc.ca
Cc: Thorleifson, Erika <Erika.Thorleifson@dfo-mpo.gc.ca>
Subject: [redacted]
Importance: High

Hi All,

[redacted]

Thanks,

Corina

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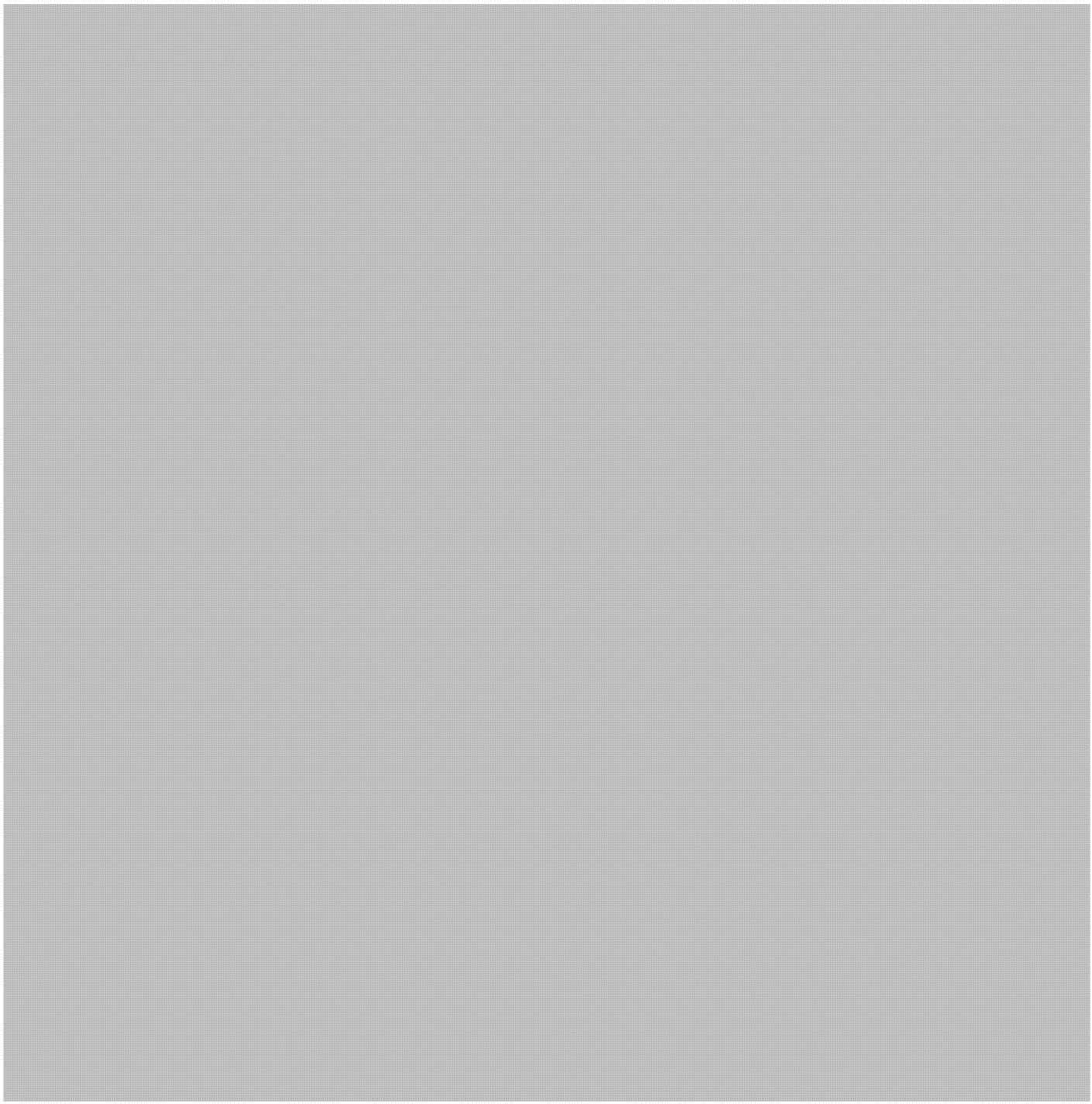
s.21(1)(a)

s.21(1)(b)

s.23

Fisheries and Oceans Canada | Pêches et Océans Canada



Canada

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s.21(1)(a)

s.21(1)(b)

s.23

Dozie, Juachi

From: Leslie, Karen
Sent: July-23-18 1:27 PM
To: Davis, Neil; MacConnachie, Sean; Webb, Cheryl
Cc: Brekke, Heather; Busby, Corina
Subject: FW: [redacted]

Hi all –

[redacted]

Karen Leslie
604-666-0395

From: Ross, Peter [mailto:Peter.Ross@justice.gc.ca]
Sent: 2018–July-23 1:18 PM
To: Busby, Corina
Cc: Legault, Josee (DOJ); Burr, Linda; Chiu, Scott; Brekke, Heather; Leslie, Karen
Subject: RE: [redacted]

Corina:

[redacted]

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[redacted]

Peter

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From: Busby, Corina [mailto:Corina.Busby@dfo-mpo.gc.ca]
Sent: Monday, July 23, 2018 11:38 AM
To: Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>; Ross, Peter <Peter.Ross@justice.gc.ca>; Legault, Josée <Josee.Legault@justice.gc.ca>
Cc: Burr, Linda <Linda.Burr@dfo-mpo.gc.ca>; Chiu, Scott <Scott.Chiu@dfo-mpo.gc.ca>; Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>
Subject: RE: [redacted]

Josee and Peter

[redacted]

Corina

From: Leslie, Karen
Sent: 2018–July-23 10:38 AM
To: Busby, Corina; Ross, Peter (DOJ); Legault, Josee (DOJ)
Cc: Burr, Linda; Chiu, Scott; Brekke, Heather
Subject: RE: [redacted]

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Thank you Corina –

[redacted]

Karen Leslie
604-666-0395

From: Busby, Corina
Sent: 2018–July-23 4:18 AM
To: Ross, Peter (DOJ); Legault, Josee (DOJ)
Cc: Leslie, Karen; Burr, Linda; Chiu, Scott
Subject: [redacted]

Hi Josée and Peter

[redacted]

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[redacted]

Corina

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Dozie, Juachi

From: Webb, Allison
Sent: July-23-18 6:31 PM
To: Barton, Meagan; Davis, Neil; Nener, Jennifer; Kotyk, Mel; Collie, Tyler
Cc: Delaney, Paula; Khanna, Sukriti; Wong, Eva; Negosu, Paula; Nooh, Asha
Subject: RE: Action Required: Upcoming Decisions for RDG, DM and Minister - Due July 24th
Attachments: Upcoming Decisions for RDG DM and Minister - YTRA.xlsx

Please find attached one submission for AMD and this also implicates RM so flagging for Neil as well.

Thanks,
Allison

Allison Webb, Director / Directrice
Aquaculture Management / Gestion de l'aquaculture
Fisheries Management Branch / Direction de la gestion des pêches
Fisheries and Oceans Canada / Pêches et Océans Canada
200 - 401 Burrard St / Rue Burrard, Vancouver BC / C.B. V6C 3S4 Canada
604-666-7009
Allison.webb@dfo-mpo.gc.ca

From: Barton, Meagan
Sent: 2018–July-23 11:30 AM
To: Webb, Allison; Davis, Neil; Nener, Jennifer; Kotyk, Mel; Collie, Tyler
Cc: Delaney, Paula; Khanna, Sukriti; Wong, Eva; Negosu, Paula; Nooh, Asha
Subject: FW: Action Required: Upcoming Decisions for RDG, DM and Minister - Due July 24th

Hi all,

Apologies for sending this out late – RDGO would like an updated list of decisions at the Regional level as well as decisions for the DM and Minister. FM has two tabs – one for regular decisions and one for IFMP's – I believe the IFMP tab is up to date and encompasses decisions that will be required to December 2018.

If you could please add/update the FM tab by tomorrow noon that would be very much appreciated!

Thanks,

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Johal, Sharan
Sent: July-18-18 11:56 AM
To: Barton, Meagan; Campbell, Erin; Domke, Jennalee; Fogliato, Cara; Ford, Leanne; Hodgkins, Vanessa; Lawrie, Kirsten; MacNeill, Jill; Naylor, Louise
Cc: Schwark, Valerie
Subject: Action Required: Upcoming Decisions for RDG, DM and Minister - Due July 24th

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Hello everyone,

With the announcement of our new minister, we need to refresh our lists for upcoming decisions to the RDG, DM and MINO over the next 6 months (July to December). Please provide your updated lists to Valerie.Schwark@dfo-mpo.gc.ca by Tuesday, July 24th. When returning your submissions please highlight new editions.

Please ensure to make updates to your group's tab and delete any decisions that have already been made.

Thank you,

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: Johal, Sharan
Sent: 2018–May-02 4:19 PM
To: Barton, Meagan; Campbell, Erin; Domke, Jennalee; Fogliato, Cara; Ford, Leanne; Hodgkins, Vanessa; Lawrie, Kirsten; MacNeill, Jill; Naylor, Louise
Subject: Input Required: Upcoming Decisions for RDG, DM and Minister

Good afternoon, if you could kindly review the attached list and provide updates for the next 6 months – May to October 2018. Please provide your input to me by COB Wednesday May 9th. When returning your submissions please highlight new editions.

Thank you

Sharan Johal

Executive Assistant to the Regional Director General, Regional Director General's Office
Fisheries and Oceans Canada/Government of Canada
sharan.johal@dfo-mpo.gc.ca/Tel: 604-666-1376/Fax: 604-666-8956

Assistant Exécutif au Directrice Général Régional, Bureau du Directrice Général Regional
Pêches et Océans Canada/Gouvernement du Canada
sharan.johal@dfo-mpo.gc.ca/Tél: 604 666-1376/Télécopier: 604-666-8956

s.21(1)(a)

s.21(1)(b)

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Upcoming Decisions for RDG, DM and Mini
- Fisheries Management -

GCCMS No.	ILO	Issue	Drafter	Decision Required by

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of the Access to Information Act

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s.21(1)(a)

s.21(1)(b)

ister - 2018

as of May 2, 2018

Submission Date to RDGO	
	[redacted]

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21(1)(b), 23, 21(1)(a)

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Dozie, Juachi

From: Thomson, Andrew
Sent: July-23-18 7:12 AM
To: Davis, Neil
Cc: Webb, Cheryl
Subject: Research permit for SRKW hydroacoustic study

Is there a scientific license permit application from Andrew Trites for hydroacoustic studies of prey for SRKW work that's sitting somewhere?

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

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Dozie, Juachi

From: Harber, Lee
Sent: August-15-18 3:52 PM
To: Davis, Neil
Subject: RKW - Implementation Plan
Attachments: RKW - Activities by Branch.xlsx

Hi Neil,

For our bilat today, I will walk us through this table.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Leslie, Karen
Sent: July-23-18 4:27 PM
To: Davis, Neil
Cc: Webb, Cheryl; Thomson, Andrew; Brekke, Heather
Subject: RE: RKW aRS: Potential change to timing for 60d consultation
Attachments: Info for Mino Briefing V1.pptx; Info for Mino Briefing V1.docx

Hi Neil –

We did just brief Mino on this on July 16. Attached is the deck used to present (Andy led), and supplementary materials for staff.

Karen Leslie
604-666-0395

From: Davis, Neil
Sent: 2018–July-23 10:31 AM
To: Leslie, Karen; Brekke, Heather
Cc: Webb, Cheryl; Thomson, Andrew
Subject: RE: RKW aRS: Potential change to timing for 60d consultation

Hi Karen and Heather,

Thx
Neil

From: Leslie, Karen
Sent: Thursday, July 12, 2018 4:23 PM
To: Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>
Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; McMillan, Christie <Christie.Mcmillan@dfo-mpo.gc.ca>; Jones, Lisa Ann <LisaAnn.Jones@dfo-mpo.gc.ca>
Subject: FW: RKW aRS: Potential change to timing for 60d consultation

Hi Cheryl, Neil, Julie –

s.21(1)(a)

s.21(1)(b)

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[redacted]

Cheers,
K

Karen Leslie
604-666-0395

From: Busby, Corina
Sent: 2018–July-12 2:33 PM
To: Leslie, Karen
Cc: Brekke, Heather; Burr, Linda; Stewart, Julie
Subject: RE: RKW aRS: Potential change to timing for 60d consultation

Hi Karen

[redacted]

Happy to discuss further.

Corina

From: Leslie, Karen
Sent: 2018–July-10 3:57 PM
To: Busby, Corina
Cc: Brekke, Heather
Subject: RKW aRS: Potential change to timing for 60d consultation

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Hi Corina,

Cheers,
K

Karen Leslie
Regional Manager, Species at Risk Program
Fisheries and Oceans Canada / Government of Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

Gestionnaire régional, Programme des espèces en péril
Pêches et Océans Canada / Gouvernement du Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

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pages 102 to / à 105

Pages 638 to / à 651

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pages 88 to / à 101

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s.21(1)(a)

s.21(1)(b)

Khanna, Sukriti

From: Harber, Lee
Sent: July-23-18 5:21 PM
To: Thomson, Andrew
Cc: Davis, Neil
Subject: FW: Draft text for comments

Andy - regarding the 'script' we have been hearing about. Looks like it will be a table that provides responses to the q's raised in the EJ letter, most of which are for DFO to respond. Corina has outlined them below and will provide final product once ready.

Lee
-----Original Message-----
From: Busby, Corina
Sent: 2018–July-23 5:15 PM
To: Sanders , Michelle; Harber, Lee
Cc: Thorleifson, Erika
Subject: RE: Draft text for comments

Hi Lee and Michelle,

We have just started on developing responses to the questions raised in the EJ letter but yes we can pull together a document/format to circulate for input in the morning. I believe from a first scan that most questions will need to be addressed by DFO. The questions we have identified are:

Questions in May 16th letter

1. EcoJustice seeks clarification of the meaning of "vessels in transit"-
2. EcoJustice seeks further information as to whether national guidelines to accompany the Amended MMR are being developed (as stated in the RIAS).
3. EcoJustice questions whether national guidelines, when developed, will be adhered to by recreational boaters. Resource Management?
4. EcoJustice questions the disparity between the RIAS statement which states that there will be no increase in enforcement costs for the MMR and the increased monitoring and enforcement announcements made June 22.

Not questions but comments:

- EcoJustice is concerned about the new approach to the definition of critical habitat. SAR Program – National and Region
- EcoJustice is concerned about the timelines for the critical habitat order. SAR Program – National and Region

Corina
-----Original Message-----
From: Sanders , Michelle [mailto:michelle.sanders@tc.gc.ca]
Sent: 2018–July-23 8:11 PM
To: Harber, Lee
Cc: Busby, Corina
Subject: Fw: Draft text for comments

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Lee - below is the draft response to ecojustice letter (with proposed edit from ECCC). Re the "script", I think it is more about having the responses to the ecojustice comments at hand. DFO (Nick W) agreed on the call today to coordinate. Corina - will you be circulating whatever table or format we should follow?

Thanks!
M

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Rascanin, Natasha <natasha.rascanin@tc.gc.ca>
Sent: Monday, July 23, 2018 7:00 PM
To: Sanders , Michelle
Subject: Fw: Draft text for comments

From: Keenan, Michael <michael.keenan@tc.gc.ca>
Sent: Monday, July 23, 2018 6:32 PM
To: Rascanin, Natasha; Pham, Thao
Cc: Little, Jennifer
Subject: Fw: Draft text for comments

FYI

Michael Keenan
Deputy Minister - Sous-ministre
Transport Canada -Transports Canada
1-613-990-4507
michael.keenan@tc.gc.ca
From: Hoang, Uyen (EC) <uyen.hoang@canada.ca>
Sent: Monday, July 23, 2018 4:57 PM
To: 'Blewett, Catherine'; Keenan, Michael
Cc: Lucas, Stephen (EC); White, Belinda (EC); 'Kahn, Zoe'
Subject: RE: Draft text for comments

Hello,

DM Lucas would like to suggest the following changes to the second paragraph.

Thank you,

Uyen

[cid:image001.png@01D422A6.4C1929A0]

From: Blewett, Catherine <Catherine.Blewett@dfo-mpo.gc.ca>
Sent: July 23, 2018 2:41 PM
To: Lucas, Stephen (EC) <stephen.lucas@canada.ca>; Keenan, Michael (Ext.) <michael.keenan@tc.gc.ca>
Subject: Draft text for comments

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Importance: High

Hi there,

See the text below. I have not yet shared with my Minister, but just want to ensure the below works?

Proposed Response:

Ms. Dyna Tuytel
Barrister and Solicitor

Ms. Margot Venton
Barrister and Solicitor

EcoJustice
< [redacted] >

Dear Ms. Tuytel and Ms. Venton:

We appreciate your continued interest in the important issue of Southern Resident Killer Whale (SRKW) conservation. In response to your recent letter, dated July 16, 2018 we also understand that you are anxious for confirmation that the Ministers will be making a recommendation to Cabinet for an emergency order.

The Ministers are respecting their obligations under the Species at Risk Act, that having formed the opinion that the SRKW face imminent threat to both survival and recovery, there is a requirement under s. 80(2) to make a recommendation to Cabinet for an emergency order for the protection of the population – unless they are of the opinion that equivalent measures have been taken under another Act of Parliament, pursuant to s. 81.

As you are aware, many measures have already been implemented to address key threats associated with prey availability and acoustic and physical disturbance, and we are in the process of identifying and protecting additional areas of critical habitat. As stated in the July 6, 2018 letter to Ecojustice, the Ministers are currently determining whether or not existing measures are providing adequate protection to allow for survival and recovery of the Southern Residents and are moving through this process as expeditiously as possible.

On July 30, 2018 we will hold the inaugural meeting of the new Indigenous and Multi-stakeholder group on Southern Resident Killer Whales, which includes all five of your clients. This forum will be an important ongoing opportunity for future discussions on protection of the Southern Residents.

Rest assured that the Government of Canada is fully committed to managing the threats impacting these iconic whales and to their survival and recovery.

Yours sincerely,

Sent from my BlackBerry 10 smartphone on the Bell network.

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21(1)(b), 21(1)(a)

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s.16(2)

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Dozie, Juachi

From: Harber, Lee
Sent: July-23-18 10:02 AM
To: Burns, Adam; Jenkins, Randy; Moore, Kendra
Cc: Thomson, Andrew; Davis, Neil; Webb, Cheryl
Subject: FW: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS
Attachments: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFT TOR V8.docx; Draft Agenda for July 30 mtgV4.docx

Hi Adam,

Just an FYI, attached draft materials for upcoming SRKW Advisory Group meeting on July 30 are being shared with ADMs via Natasha Rascanin today. Neil will raise this for brief discussion on the NHQ-PAC call later today.

Please let us know if you have any questions.

Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Sanders , Michelle [mailto:michelle.sanders@tc.gc.ca]
Sent: 2018–July-22 7:36 PM
To: Webb, Cheryl; Thomson, Andrew; Myers, Yvette; gwen.goodier@canada.ca
Cc: Harber, Lee; 'mary-ann.spicer@canada.ca'; Henneman, Sonja; Winfield, Nicholas
Subject: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

All,
Attached are the versions that Natasha will be sending out to ADMs. As flagged earlier today, she asked that we remove the Purpose clause in the ToRs as she found it redundant with the Objectives, and felt it took it a little further than she was comfortable with re "recommendations". If you feel strongly about having the purpose clause in there I would flag it to your respective ADMs to raise on the call on Monday. That is the only substantive change. Otherwise these should reflect our discussions on Friday.

Thanks,
Michelle

Michelle Sanders
A/DG, Environmental Policy /
DG p.i, Politiques environnementales
613-949-2753 (w) / [redacted] (bb)

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Southern Resident Killer Whale
Indigenous and Multi-stakeholder Advisory Group

Terms of Reference
(DRAFT July 22, 2018)

1. BACKGROUND

As identified at the October 2017 Symposium for the Southern Resident killer whale (SRKW) and the recent *Whales Initiative* technical briefing and roundtable discussion on June 22, 2018, this Advisory Group has been established by the federal departments of Fisheries and Oceans Canada, Transport Canada, and Environment and Climate Change Canada to bring together Indigenous groups, multiple stakeholders, and implicated jurisdictions to facilitate communication and coordination of activities to recover SRKW.

This advisory group does not replace the Crown's Duty to Consult and accommodate nor does it replace the regular engagement and consultation on individual initiatives and measures related to SRKW recovery.

2. OBJECTIVES

The main objectives of the advisory group will be to:

a. Provide a forum for the participants to discuss actions underway and planned by federal departments and others to protect SRKW, and to allow participants to provide advice on recovery actions and to share information to help inform government decision-making.

b. Promote dialogue and improve shared understanding of the complexities of SRKW recovery, shared responsibilities, and respective authorities of Advisory Group participants to reduce SRKW threats.

c. Identify opportunities for collaboration and partnership that can advance the collective implementation of the recovery measures identified in the Species at Risk *Action Plan for Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada* (2017) and Oceans Protection Plan *Review of the Effectiveness of Recovery Measures for Southern Resident Killer Whales* (2017), and the measures announced under the federal *Whales Initiative* on June 22, 2018 to promote recovery of the species.

> *Discussion question: Are there specific milestones or deliverables that you would like to identify under these objectives?*

3. GOVERNANCE AND MEMBERSHIP

The Indigenous and Multi-stakeholder Advisory Group will consist of representatives from various Indigenous and stakeholder groups: indigenous communities, Non-Governmental Organizations (NGO),

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the shipping and marine transportation, fishing, and whale watching sectors, the Government of British Columbia, and Metro Vancouver Regional District.

The Advisory Group will be chaired by the Regional Director General of Fisheries and Oceans Canada (DFO), with ex-officio participation of senior officials from DFO, Transport Canada, and Environmental and Climate Change Canada.

Discussion question: Is there interest is having a non-federal co-chair and if yes then how would a non-federal co-chair be selected?

Any decisions on changes to membership will be decided by the chair/co-chairs with input from members of the Advisory Group.

The Advisory Group secretariat will report out on the discussions that were held and the recommendations made, noting the degree of support or divergence among members for advice on different issues.

If a member of the Advisory Group is unable to attend a meeting an alternate participant may attend on their behalf. Additional observers are welcome to listen to discussions however participation is limited to members or designated alternates.

The Advisory Group will refer to other existing technical committees and working groups as needed to address technical questions and issues. If, through discussion, a need or gap is identified, the Advisory Group may consider establishing supporting technical groups for specific purposes. .

4. RESPONSIBILITIES OF PARTICIPANTS

Review circulated information.

Participate in meetings or assign alternate to attend.

Engage in open and respectful dialogue, seeking to understand and be understood.

Communicate out to their respective organizations/communities the activities and outcomes of this Advisory Group.

5. MEETING PROCESS

The Advisory Group is anticipated to meet up to 4 times per year, however this may be adjusted by the chair/co-chair, if needed. Teleconferencing and video conferencing will be used where possible to minimize travel demands.

Discussion question: How often should this group meet?

Federal departments will provide secretariat services to support meeting delivery and the preparation of summary meeting notes.

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Advisory group participants will be invited to propose topics for future meetings. Agendas will be approved by the chair/co-chair.

> *Discussion question: What do you feel should be a priority topic on future agendas?*

6. REPORTING

The Chair will disseminate meeting summary notes through the federal secretariat to this Advisory Group.

Individual participants of this Advisory Group will also report back to their respective organizations.

The Chair/secretariat will provide draft meeting summary notes that include a record of recommendations and follow up actions to all participants within two weeks of the meeting. The Advisory Group will have 2 weeks to review summary notes prior to their finalization.

7. LINKAGES

The Advisory Group may be informed and advised by other various and already established SRKW working groups and committees, which are generally threat-based. A list of other currently active groups is provided at Annex B.

> *Discussion Question: Are there other relevant or related working groups or discussion forums that should be included in this table?*

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Annex A: Participant List

Sector	Name	Position	Affiliation	E-mail
Indigenous representatives			UBC	
			First Nations Summit	
			FNFC	
			FNFC	
			FNFC	
NGOs			Raincoast Conservation Foundation	
			Georgia Strait Alliance	
			WWF Canada	
			David Suzuki Foundation	
			Natural Resources Defence Council	
			Vancouver Aquarium [Oceans Wise / CORI Team]	
Shipping Industry			Port of Vancouver	
			Shipping Federation of Canada	
			Chamber of Shipping	
			Canadian Ferry Association	
Fishing Industry			Sport Fishing Advisory Board	
			BC Seafood Alliance	
Whale Watching			Pacific Whale Watching Association	

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Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca
Municipal Government			City of Vancouver	
Federal government	Rebecca Reid	Regional Director General, Pacific Region	DFO	Rebecca.Reid@dfo-mpo.gc.ca
	Carmel Lowe	Regional Director, Science, Pacific Region Science	DFO	Carmel.Lowe@dfo-mpo.gc.ca
	Andy Thomson	Regional Director, Fisheries Management	DFO	Andrew.Thomson@dfo-mpo.gc.ca
	Sylvie Lapointe	ADM, Fisheries and Harbours Management	DFO	Sylvie.Lapointe@dfo-mpo.gc.ca
	Michelle Sanders	Director, Clean Water Policy	TC	Michelle.Sanders@tc.gc.ca
	Megan Nichols	Director General, Environmental Policy	TC	Megan.Nichols@tc.gc.ca
	Yvette Myers	Executive Director, Oceans Protection Plan	TC	Yvette.Myers@tc.gc.ca
	Marc D'Iorio	DG, Industrial Sectors, Chemicals, and Waste Directorate	ECCC	Marc.diorio@canada.ca
	Cecilia Wong	Senior Ecosystem Scientist	ECCC	cecilia.wong@canada.ca

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Annex B: Existing Working Groups/Committees			
Name of engagement activity	**Description**	**Purpose**	**Contact Person**
SRKW committee	Developed from need to have more engagement with First Nations and stakeholders around management measures for SRKW to reduce threat of prey availability and secondarily disturbance	ToR being drafted; but generally provide for engagement with First Nations and Stakeholders to discuss and get input on management actions for SRKW related to abating threat of reduced prey availability	
Canada-United States			
Toxics Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. Toxics working group formed as one of the three to support the Task Force.	Identify, research, and analyze potential actions for consideration.	
Vessels and Noise Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. The Working Group on Vessels and Noise reports to the Washington State Southern Resident Killer Whale Task Force	To develop recommendations on actions to reduce physical and acoustic disturbance impacting SRKW.	
Prey Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of	Identify range of actions to be considered to abate threat of reduced prey availability within Habitat, Harvest, Hydro, Hatcheries, Predations; prioritize, identify conflicts and synergies and deliver refined set of actions to Task Force to be considered in	

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	Southern Residents and necessary to secure a healthy and sustained population for the future. Prey working group formed as one of three to support the Task Force.	final report due Nov.1 2018	
Salish Sea Transboundary Ecosystem Indicators (TBI) Project	The TBI project is led by Environment and Climate Change Canada (ECCC) and the United States Environmental Protection Agency (US EPA) to characterize the state of ecosystem health in the Salish Sea (overlaps with SRKW critical habitat) and convene subject experts to identify threats and responses to concerning trends. Ten indicators are tracked including SRKW abundance, toxics in the food web and chinook abundance. A public facing website supports communication of project outcomes.	The TBI project is a commitment under the ECCC - US EPA Statement of Cooperation to share information and foster collaboration on priority issues in the Salish Sea ecosystem.	
DFO/ National Oceanic and Atmospheric Administration prey working group	Group that has organized workshops to review and understand the science on prey availability for SRKW and identify potential management action.		
SRKW and Underwater Vessel Noise			
Enhancing Habitat Cetacean Observation (ECHO) Advisory Working Group (AWG)	The ECHO AWG brings together a broad spectrum of interests from Canada and US to address threats to at-risk whales.	The role of the AWG is to provide the ECHO program management team with input, advice and recommendations during the development and execution of the program's projects and initiatives.	
Enhancing Habitat Cetacean Observation (ECHO) Vessel Operators Committee (VOC)	The ECHO VOC was established in December 2016 to provide the ECHO Program team with advice, support and guidance pertaining to potential mitigation options that may directly impact the shipping industry.	To bring key stakeholders together to develop mitigation options to reduce underwater vessel noise	
Ship Noise Mitigation Risk Assessment	The Ship Noise Mitigation Risk Assessment was commissioned by Transport Canada to assess and quantify the navigation safety risks associated with introducing or	The purpose of the stakeholder engagement sessions was to present the results of the TC commissioned risk assessment, and seek feedback	

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	implementing potential mitigation measures to address underwater noise in the Salish Sea.	from key industry stakeholders, First Nations and US Tribes in the Salish Sea region.	

*** While the Government of Canada is actively participating in the sub-working groups in terms of information sharing and identifying opportunities for collaborations, it is only an observer on the Task Force and will not be part of recommendations made to the Governor.**

DRAFT

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SOUTHERN RESIDENT KILLER WHALES
INDIGENOUS AND MULTI-STAKEHOLDER ADVISORY GROUP

AGENDA - ANNOTATED

Monday July 30, 2018 10:00 am- 12:00 pm
Location: 401 Burrard St. Room
2nd Floor, Boardroom C and D

Time	Agenda Item	Objective & Reference Materials	Presenter(s)
10:00AM – 10:15AM *(15 mins)*	**Welcome, Opening Remarks & Introductions** • Opening Remarks • Review Agenda ○ Ratify Summary Report from first meeting	**Materials:** ○ **Draft Agenda** (distributed in advance of the meeting) ○ **Speaking points** for RR on: 1) key themes from summary report and 2) status of questions from first meeting **Lead:** Lee w/ input from ECCC and TC	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region
10:15AM-11:00AM (45 mins)	**Review draft Terms of Reference** • Key questions to steer discussion and feedback\ • Discussion on potential Science sub-advisory group	**Materials:** ○ Speaking points for RR to walk through key features of TOR ○ **Draft ToR with embedded questions to steer discussion and input from participants** **Lead:** Lee w/ input from ECCC and TC	All participants
11:00AM-11:20AM *(20 mins)*	**Discussion on Forward Agenda for Advisory Group** • Identify priority areas for information and discussion at future meetings.	**Discussion** Priorities areas for future discussion: ○ Topics identified by Group on June 22: • Compliance with recovery Measures • Setting Targets (short & long term). ○ Other important areas for consideration: • DFO/TC/ECCC to present	**All participants**
11:20AM-11:50AM *(30 mins)*	**Updates / Recent Developments** 1. Update on MMR's 2. Update on New Critical Habitat: Amended RKW recovery strategy	**Materials:** ○ **PowerPoint Presentation with Speaking Point Presenters on updates.** ○ **Hand-out's on updates** for group	Update 1: DFO Update 2: DFO Update 3: TC

Comment [LH1]: Who will present these updates? RR or Tech expert

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	3. Lateral Displacement in Strait of Juan de Fuca / Vessel Slow Down in Haro Strait	i.e. media lines and news release on MMRs Use off-the-shelf Communications products	
11:50AM – 12:00PM *(10 mins)*	**Closing Remarks** ○ Next Steps ○ Action Items	**Objectives** Identify next steps & action items	**Chair: Rebecca Reid** Regional Director General, DFO – Pacific Region

DRAFT

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Dozie, Juachi

From: Thomson, Andrew
Sent: July-23-18 10:47 AM
To: Harber, Lee; Moore, Kendra
Cc: Davis, Neil; Webb, Cheryl
Subject: Re: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

when we send the invite out - we will ask the invitees if they have any items they want to bring up at the update portion.

Add the science piece back in to the updates section

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Harber, Lee
Sent: Monday, July 23, 2018 10:43 AM
To: Thomson, Andrew; Burns, Adam; Jenkins, Randy; Moore, Kendra
Cc: Davis, Neil; Webb, Cheryl
Subject: RE: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

Ok will do.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Thomson, Andrew
Sent: 2018–July-23 10:43 AM
To: Harber, Lee; Burns, Adam; Jenkins, Randy; Moore, Kendra
Cc: Davis, Neil; Webb, Cheryl
Subject: Re: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

On the TOR

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Take out the Purpose section

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Harber, Lee
Sent: Monday, July 23, 2018 10:02 AM
To: Burns, Adam; Jenkins, Randy; Moore, Kendra
Cc: Thomson, Andrew; Davis, Neil; Webb, Cheryl
Subject: FW: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

Hi Adam,

Just an FYI, attached draft materials for upcoming SRKW Advisory Group meeting on July 30 are being shared with ADMs via Natasha Rascanin today. Neil will raise this for brief discussion on the NHQ-PAC call later today.

Please let us know if you have any questions.

Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Sanders , Michelle [mailto:michelle.sanders@tc.gc.ca]
Sent: 2018–July-22 7:36 PM
To: Webb, Cheryl; Thomson, Andrew; Myers, Yvette; gwen.goodier@canada.ca
Cc: Harber, Lee; 'mary-ann.spicer@canada.ca'; Henneman, Sonja; Winfield, Nicholas
Subject: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

All,
Attached are the versions that Natasha will be sending out to ADMs. As flagged earlier today, she asked that we remove the Purpose clause in the ToRs as she found it redundant with the Objectives, and felt it took it a little further than she was comfortable with re "recommendations". If you feel strongly about having the purpose clause in there I would flag

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it to your respective ADMs to raise on the call on Monday. That is the only substantive change. Otherwise these should reflect our discussions on Friday.

Thanks,
Michelle

Michelle Sanders
A/DG, Environmental Policy /
DG p.i, Politiques environnementales
613-949-2753 (w) / [redacted] bb)

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Dozie, Juachi

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Sent: July-23-18 10:36 AM
To: Harber, Lee; Burns, Adam; Jenkins, Randy; Moore, Kendra
Cc: Davis, Neil; Webb, Cheryl
Subject: Re: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

From ADM call

Expand the agenda from 930 to 1230.

Collapse the TOR and forward agenda items into a single 1 hour block

In the updates section - add a line for other updates.

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

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Sent: Monday, July 23, 2018 10:02 AM
To: Burns, Adam; Jenkins, Randy; Moore, Kendra
Cc: Thomson, Andrew; Davis, Neil; Webb, Cheryl
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Please let us know if you have any questions.

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Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: (

From: Sanders , Michelle [mailto:michelle.sanders@tc.gc.ca]
Sent: 2018–July-22 7:36 PM
To: Webb, Cheryl; Thomson, Andrew; Myers, Yvette; gwen.goodier@canada.ca
Cc: Harber, Lee; 'mary-ann.spicer@canada.ca'; Henneman, Sonja; Winfield, Nicholas
Subject: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

All,
Attached are the versions that Natasha will be sending out to ADMs. As flagged earlier today, she asked that we remove the Purpose clause in the ToRs as she found it redundant with the Objectives, and felt it took it a little further than she was comfortable with re "recommendations". If you feel strongly about having the purpose clause in there I would flag it to your respective ADMs to raise on the call on Monday. That is the only substantive change. Otherwise these should reflect our discussions on Friday.

Thanks,
Michelle

Michelle Sanders
A/DG, Environmental Policy /
DG p.i, Politiques environnementales
613-949-2753 (w) / bb)

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Mbarushimana, Jenny

From: Jones, Lisa Ann
Sent: July-24-18 2:13 PM
To: Leslie, Karen
Cc: Brekke, Heather
Subject: RE: external review questions
Attachments: Discussion guide_RKW amended RS.docx

Hi Karen,

They are located here:

\\Dcbcvanna01b\VAN_RHQ_3\Program Planning\SARA\4000 OPERATIONS\02_SPECIES_INFORMATION\WHALE, KILLER (RESIDENT)\06 CONSULTATIONS & CORRESPONDENCES\RKW amended RS 2018\6. Webpage\Final\Discussion guide_RKW amended RS.docx

And have attached the doc.

Cheers
Lisa

From: Brekke, Heather
Sent: July-24-18 2:07 PM
To: Jones, Lisa Ann
Cc: Leslie, Karen
Subject: FW: external review questions

Hi Lisa

Can you please provide Karen with the question below?

Thanks
Heather

From: Leslie, Karen
Sent: July-24-18 1:47 PM
To: Brekke, Heather
Subject: external review questions

Heya – I have raised w SARNAC the need to discuss revisions to the national questions. Can you pls send me the q's and/or direct me to where they are located?

Karen Leslie
Regional Manager, Species at Risk Program
Fisheries and Oceans Canada / Government of Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

Gestionnaire régional, Programme des espèces en péril
Pêches et Océans Canada / Gouvernement du Canada

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Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

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Discussion Guide

External review of the critical habitat section (section 7) of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada

Fisheries and Oceans Canada (DFO) and the Parks Canada Agency (PCA) would like your feedback on the revised critical habitat section (section 7) of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada.

In 2003, Northern Resident Killer Whales were listed as Threatened and Southern Resident Killer Whales were listed as Endangered under the *Species at Risk Act* (SARA). The Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada (finalized in 2008 and amended in 2011) identified two critical habitat areas based on best available science at the time, one for Northern Resident Killer Whales and one for Southern Resident Killer Whales, which were legally protected by a SARA section 58 Critical Habitat Order in 2009. In 2017, the SARA Action Plan for the Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada was finalized.

The current draft Amended Recovery Strategy updates the critical habitat for Resident Killer Whales, based on new science advice. It identifies two additional important habitat areas as proposed critical habitat for Resident Killer Whales. These include: 1) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (important for both Northern and Southern Resident Killer Whales); and 2) waters of west Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit (important for Northern Resident Killer Whales).

The amendment also provides clarification of the functions, features and attributes for all critical habitat identified for Northern and Southern Resident Killer Whales. The features of critical habitat for Resident Killer Whales are: 1) availability of Chinook Salmon, Chum Salmon and other important prey species; 2) acoustic environment; 3) water quality; 4) physical space around individual whales (200m); and 5) for Northern Resident Killer Whales, suitable physical habitat to allow for beach rubbing behaviour.

Minor updates were made to the document to reflect the new information in the background section as well as formatting. Aside from these minor updates, there are no changes to content in any section other than section 7.

DFO and the PCA are seeking feedback on section 7 of the draft Amended Recovery Strategy for Northern and Southern Resident Killer Whales. Additional scientific, technical and traditional knowledge will assist in recovery of this species. Your input will help finalize the documents and support the recovery goal and objectives for Northern and Southern

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Resident Killer Whales. Please provide any comments you have on section 7 of the draft Amended Recovery Strategy in the spaces provided below. If you feel unable or do not wish to answer a particular question, please leave it blank. You can choose to answer as many or as few questions as you like.

After we have received your feedback and finalized the draft Amended Recovery Strategy, a proposed document will be posted to the SARA Public Registry for a 60-day public comment period. The Government will then have 30 days to incorporate comments before posting the final document on the Species at Risk Public Registry.

ADDITIONAL INFORMATION:

- Reviews of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada are limited to section 7 (critical habitat section) of the document. Consultation on all other sections was completed prior to posting of the final Recovery Strategy on the Species at Risk Public Registry in 2008.
- The draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada (2018) may be viewed here: [Insert link]
- The Science Advisory Report supporting identification of the additional critical habitat can be found here: Identification of Habitats of Special Importance to Resident Killer Whales (*Orcinus orca*) off the West Coast of Canada
- The original Recovery Strategy (2008, amended in 2011) may be viewed here: Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada
- The 2009 Critical Habitat Order can be found here: Critical Habitats of the Northeast Pacific Northern and Southern Resident Populations of the Killer Whale (*Orcinus orca*) Order (2009)
- The Action Plan for the Northern and Southern Resident Killer Whale may be viewed here: Action Plan for the Northern and Southern Resident Killer Whale (*Orcinus orca*) *in Canada*
- [Insert link to CH Q & A document]
- Information provided in the comment forms may be made available to the public if it is requested through the *Access to Information and Privacy* (ATIP) process.

AMENDED RECOVERY STRATEGY

Section 7 – Critical Habitat

Critical habitat is defined in SARA as *"...the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in a recovery strategy or in an action plan for the species".*

Section 7 of the **Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada** has been amended to include two proposed additional critical habitat areas, and to provide clarification of the functions, features and attributes for all critical habitat identified for Northern and Southern Resident Killer Whales.

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Under SARA, critical habitat for aquatic species must be legally protected from destruction. For Northern and Southern Resident Killer Whales, it is anticipated that this will be accomplished through a SARA Critical Habitat Order.

a) Do you have any additional information relevant to the identification of critical habitat for Northern and Southern Resident Killer Whales, including features, functions and attributes?

b) Do you anticipate being directly affected by the identification and subsequent protection of the additional critical habitat and/or clarification of features, functions and attributes of critical habitat for Northern and Southern Resident Killer Whales?

c) Do you have any additional feedback regarding section 7 of the draft Amended Recovery Strategy for Northern and Southern Resident Killer Whales?

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Thank you for taking the time to review and comment on the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada.

Submitting your response by July 11, 2018 will allow us to consider your feedback.

CONTACT INFORMATION (optional - recommended)

Name	
Organization / Affiliation	
Mailing Address	
Email Address	
Phone Number	

Submit Reset

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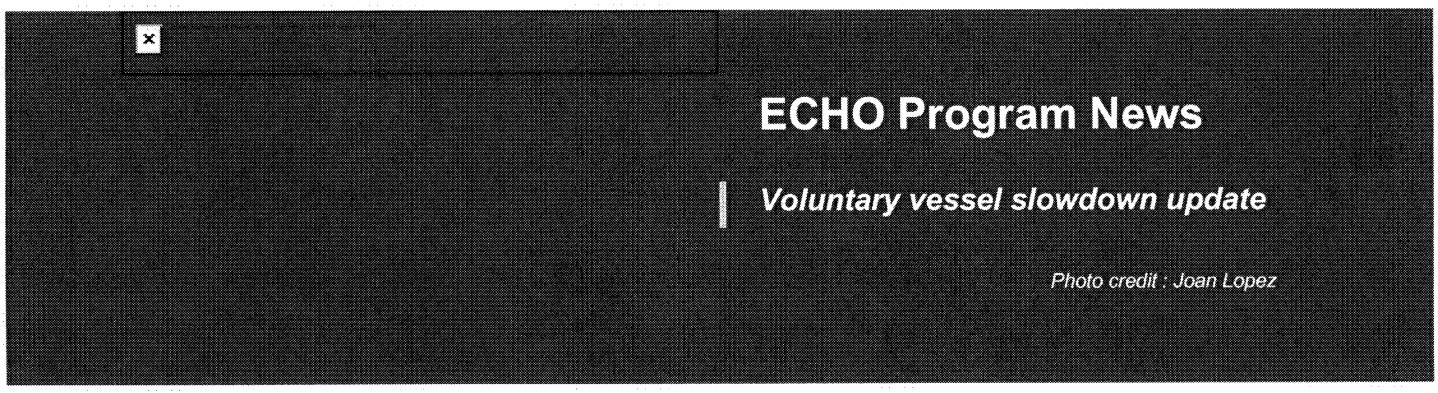
Wong, Eva

From: ECHO Program <ECHO@portvancouver.com>
Sent: July-24-18 1:10 PM
To: Brekke, Heather
Subject: Haro Strait voluntary slowdown - Week one results

Vessel slowdown off to an excellent start

No Images? Click here



Haro Strait voluntary slowdown off to an excellent start

It has been just over one week since the southern resident killer whales were spotted in Haro Strait, triggering the start of the voluntary vessel slowdown. The voluntary slowdown will now remain in effect until at least September 15th 2018. Thank you to everyone who participated in this first week - we are very pleased with the participation rate so far.

Week 1 Participation Rate: 80%

Between July 12-19, agents flagged 76 of 88 transits as potential candidates for participating in the slowdown and 70 of those participated, indicating a total vessel participation rate of **80%.**

PLEASE NOTE: Participation rates shown are based on reporting to Pacific Pilotage Authority dispatch following each transit. AIS data will be used later to confirm transit speeds.

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Whale whereabouts

Observers on San Juan Island confirm that southern resident killer whales were detected in and around Haro Strait every day during the first week of the slowdown. This photo shows a bulk carrier participating in the slowdown with J-42, an 11-year old female whale commonly known as Echo, in the foreground. *Photo credit: Jeanne Hyde*

Thank you

The ECHO Program thanks you for slowing down for Echo and the other 74 southern resident killer whales! We realize that it takes time to adjust to new systems and processes and we are very encouraged to see such positive participation rates. We look forward to reporting consistently high participation rates over the coming weeks.

Questions? Review our webpage, email echo@portvancouver.com or call the 24/7 Operations Center at 604.665.9086

If this email was forwarded to you, sign up here to get updates directly.

For more information about and resources for the Haro Strait slowdown, please keep an eye on the **webpage.** If you have been forwarded this newsletter and would like to receive regular updates click here.

If you have specific questions, please email echo@portvancouver.com.

Learn more at portvancouver.com/echo

Like Tweet Share Forward

Vancouver Fraser Port Authority
100 The Pointe, 999 Canada Place
Vancouver, B.C. V6C 3T4

You are receiving this email because of your interest and/or participation in the voluntary vessel noise reduction initiatives taking place this summer. These initiatives aim to reduce underwater noise which effects endangered killer whales.

s.19(1)

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Dozie, Juachi

From: John Durban - NOAA Federal [redacted]
Sent: July-24-18 6:40 PM
To: Ken Balcomb
Cc: brad hanson; Joe Gaydos; Thornton, Sheila; Mike Ford; Stephen AGRI:EX Raverty; Cottrell, Paul; Hendrik Nollens; Lynne Barre; Candi Emmons; Linda Rhodes; David Ellifrit; Mark Malleson
Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition

Thanks for the update Ken. Sad news.
- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

On Jul 24, 2018, at 6:08 PM, Kenneth Balcomb III <[redacted] wrote:

Hello all,

The whale watch operators are all staying away from J50. The depression behind her cranium is slightly deepening, and we are keeping a file of all photographs that show her well; but, we are also not typically attempting to get closer than 200 yards. The WW operators are staying a kilometer or more away, and going to different groups of whales as opportunity permits. No need for an ask. J50 is not evidencing any sign of disease in the photographs we have since January. Her behavior is sometimes as depicted in Katy's video. Often she trails the other whales, but not always. It is interesting that the J16s remained in the core area while the other SRKWs went out the Strait of Juan de Fuca recently.

Today, Mark Malleson reported a new calf with the J17s off of the Victoria waterfront. By the time Dave Ellifrit and Michael Weiss of CWR San Juan arrived, J35 (daughter of J17) was off Discovery Island and she was pushing a dead calf on her rostrum. The dead calf would occasionally slip off her rostrum and sink, at which time J35 would dive down and retrieve the carcass, sometimes by mouthing the pectoral flipper and then balancing it on her head at the surface. The time between Mark's report and photographs of a calf and our CWR team observation of a dead calf was approximately one half hour. J35 carried the dead calf to the area of Hannah Heights San Juan Island for approximately four hours, and is still carrying it as far as we know. The other J16s did not exhibit unusual behaviors. Maybe they are getting used to this situation. We will be analyzing the photographs.

Mark, thanks for the photo. Dave, Michael and Mark, please let me know if this summary matches your observations.
Ken

On Jul 24, 2018, at 5:11 PM, Joseph Karl Gaydos [redacted] wrote:

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Hi All,

For those of you that responded, it sounds as if a **Thursday morning 8AM call** will be best to discuss concerns about J50's body condition and behavior. The call should be brief. For those of you that are able to participate, here are the details:

Conference Call Line:
call (515) 739-1032
code 470496# (be sure to push the #)

Specifically, I think it would be good to discuss:
- do we need further documentation about her body condition or behavior?
- is she exhibiting signs of disease other than poor body condition?
- how was her body condition score last time it was measured via photogrammetry (Sept 2017, right John)?

NOAA and DFO may want to discuss
- is there a need to ask whale watch and other vessels to give her a larger space than is normally require? Is there a method for this?
- do we need to collecting any further diagnostic information that might help assess the underlying condition

Finally, here is a link to a short video that Katy Foster put together of J50 and the sampling Brad Hanson et al. conducted
https://vimeo.com/281354035/beece0b947
Password: J50Health

Best,
JOE

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Dozie, Juachi

From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: July-24-18 4:16 PM
To: Cottrell, Paul
Subject: Fw: J50 condition

From: Joseph Karl Gaydos [redacted]
Sent: Tuesday, July 24, 2018 1:12:19 PM
To: Raverty, Stephen AGRI:EX
Subject: Re: J50 condition

Hi Steve - I asked Lynne to invite him. I think it is important he is there.
Stay tuned.
JOE

Joseph K. Gaydos
360-376-3910
[redacted]
www.seadocsociety.org<http://www.seadocsociety.org>

On Jul 24, 2018, at 1:00 PM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca<mailto:Stephen.Raverty@gov.bc.ca>> wrote:

Joe. Could you please ask Paul Cottrell to participate in the call. Thank you Stephen

---

From: Joseph Karl Gaydos <[redacted]>
Sent: Monday, July 23, 2018 3:41:54 PM
To: Brad Hanson
Cc: Mike Ford; Candice Emmons; Lynne Barre; orcasurvey; John Durban; Hendrik Nollens; Raverty, Stephen AGRI:EX
Subject: Re: J50 condition

Hi Brad, Mike, Candi, Lynne, Ken, John, Steve, and Hendrik,

I know you are all extremely busy, but I was wondering if you might be able to have a short phone call this week to discuss J50s condition.

Specifically, I'm wondering:
- do we need further documentation about her body condition or behavior?
- is she exhibiting any other signs of disease?
- how was her body condition score last time it was measured via photogrammetry (Sept 2017, right John)?

Also, I think it would be worth discussing if there is anything that can or needs to be done, including:
- asking whale watch and other vessels to give her a larger space than is normally required
- collecting any further diagnostic information that might help assess the underlying condition

I'm proposing a brief 8AM call Thursday or Friday this week. Please let me know if you can join in on a 30 min call on either day.

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I will select a day when the majority of us can participate and send out a cal in number by COB tomorrow.

Lynne, Brad, Mike and Candi - I'll let you decide if you want to ask DFO to participate in the call. My thought is that it would be good to have somebody from DFO participate.

Thanks,
JOE

FYI - I went back to see if J50 had any evidence of historical skin disease (From Ken's photo and from our scoring). Here's what I found:
Birth 2014
April 7, 2014 - April 19, 2014: calf epithelial sloughing (normal for newborns) May 22, 2015 - August 20, 2016: gray patches May 22, 2015 - April 4, 2016: gray target lesions March 25, 2016 - April 25, 2016: black pinpoint lesions

Joseph K. Gaydos
360-376-3910
[redacted]
www.seadocsociety.org<http://www.seadocsociety.org/><http://www.seadocsociety.org<http://www.seadocsociety.org/>>

On Jul 23, 2018, at 3:25 PM, Brad Hanson (NOAA Federal)
<[redacted]> wrote:

All

got a call from Giles on Thursday that she had been out with the J16s that day and caught a whiff of J50's breath and it had that characteristic stench we have detected in few of the whales before they died.

I was headed up to the SJI for the weekend so took breath sampling gear along and Sam Wasser was amenable to us using his boat so Giles took several of us out including, Jeff and Katy foster. We were able to get a couple of drops of vapor from J50 on the nylon and I turned that over to Linda Rhodes this AM for analysis. Interestingly we did not detect any foul smelling breath form J50 on Saturday.

Katy shot some excellent video of the encounter - have asked that she pull some screen shots from it that are small enough to email.

while Candi and i didnt get great look at J50 in June my sense was that the whale was thinner than last month

Was just on the phone with Joe and he will be sending out an email to have a discussion call on condition evaluation

thanks

Brad

--
==========
M. Bradley Hanson, Ph.D.
NOAA/NMFS/Northwest Fisheries Science Center
2725 Montlake Blvd. E
Seattle, WA 98112

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Office phone: 206-860-3220
Fax: 206-860-3400
Cell Phone [redacted]

s.19(1)

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Dozie, Juachi

From: Thomson, Andrew
Sent: July-24-18 4:48 PM
To: Davis, Neil
Subject: SRKW

What do you think of this

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

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Davis, Neil

From: Leslie, Karen
Sent: Tuesday, July 24, 2018 7:50 AM
To: Brekke, Heather; Davis, Neil
Subject: FW: SRKW
Attachments:

Hopefully this one works

Karen Leslie
604-666-0395

From: Busby, Corina
Sent: 2018–July-24 5:22 AM
To: marc.diorio@canada.ca; michelle.sanders@tc.gc.ca; gwen.goodier@canada.ca; megan.nichols@tc.gc.ca; laura.farquharson@canada.ca; sarah.wren@canada.ca; carolyn.seburn@canada.ca
Cc: Winfield, Nicholas; Thorleifson, Erika; Stewart, Julie; Leslie, Karen; Webb, Cheryl; Thomson, Andrew
Subject: SRKW

Hi All,

Regards,
Corina

Corina Busby
Manager, Operations, Species at Risk
Fisheries and Oceans Canada / Government of Canada
200 Kent Street, 10W058
corina.busby@dfo-mpo.gc.ca / Tel: 613-218-5945

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Gestionnaire des opérations, Espèces en péril
Pêches et Océans Canada / Gouvernement du Canada
200 Rue Kent, 10W058
corina.busby@dfo-mpo.gc.ca / Tél. 613-218-5945

Pages 689 to / à 691

are withheld pursuant to sections

sont retenues en vertu des articles

69(1)(g) re: (e), 69(1)(g) re: (a)

of the Access to Information Act

de la Loi sur l'accès à l'information

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

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Davis, Neil

From: Brekke, Heather
Sent: Tuesday, July 24, 2018 8:57 AM
To: Davis, Neil
Subject: RE: SRKW [redacted]

Hi Neil,

As discussed, I would flag that input from appropriate FM folks would be useful early in this review, most notably: Jennifer Nener/Jeff Grout, Paul Cottrell, and potentially others in PD [redacted] However, it may be best to walk through this collectively.

Cheers
Heather

From: Leslie, Karen
Sent: July-24-18 7:50 AM
To: Brekke, Heather; Davis, Neil
Subject: FW: SRKW [redacted]

Hopefully this one works

Karen Leslie
604-666-0395

From: Busby, Corina
Sent: 2018–July-24 5:22 AM
To: marc.diorio@canada.ca; michelle.sanders@tc.gc.ca; gwen.goodier@canada.ca; megan.nichols@tc.gc.ca; laura.farquharson@canada.ca; sarah.wren@canada.ca; carolyn.seburn@canada.ca
Cc: Winfield, Nicholas; Thorleifson, Erika; Stewart, Julie; Leslie, Karen; Webb, Cheryl; Thomson, Andrew
Subject: SRKW [redacted]

Hi All,

[redacted]

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[redacted]

Regards,
Corina

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Corina Busby
Manager, Operations, Species at Risk
Fisheries and Oceans Canada / Government of Canada
200 Kent Street, 10W058
corina.busby@dfo-mpo.gc.ca / Tel: 613-218-5945

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s.16(2)

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Dozie, Juachi

From: Harber, Lee
Sent: July-24-18 8:44 AM
To: Thomson, Andrew
Cc: Davis, Neil
Subject: RE: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS
Attachments: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFT TOR V8.docx; Draft Agenda for July 30 mtgV5.docx

Hi Andy,

Attached are the versions with ADM changes, which we discussed with Rebecca yesterday. Did you say that you had flipped these versions back up to ADMs? Just want to be clear on the approvals process so I can have them ready to send out with invite tomorrow to participants (later in the day).

Thanks
Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB

From: Harber, Lee
Sent: 2018–July-23 12:41 PM
To: Thomson, Andrew
Cc: Davis, Neil
Subject: RE: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

Hi Andy,

Updated Agenda and ToR as per direction from ADM call this morning. Will also get follow-up letter going today.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

From: Thomson, Andrew
Sent: 2018–July-23 10:47 AM
To: Harber, Lee; Moore, Kendra
Cc: Davis, Neil; Webb, Cheryl
Subject: Re: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

when we send the invite out - we will ask the invitees if they have any items they want to bring up at the update portion.

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Add the science piece back in to the updates section

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
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andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Harber, Lee
Sent: Monday, July 23, 2018 10:43 AM
To: Thomson, Andrew; Burns, Adam; Jenkins, Randy; Moore, Kendra
Cc: Davis, Neil; Webb, Cheryl
Subject: RE: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

Ok will do.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Thomson, Andrew
Sent: 2018–July-23 10:43 AM
To: Harber, Lee; Burns, Adam; Jenkins, Randy; Moore, Kendra
Cc: Davis, Neil; Webb, Cheryl
Subject: Re: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

On the TOR

Take out the Purpose section

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

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andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Harber, Lee
Sent: Monday, July 23, 2018 10:02 AM
To: Burns, Adam; Jenkins, Randy; Moore, Kendra
Cc: Thomson, Andrew; Davis, Neil; Webb, Cheryl
Subject: FW: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

Hi Adam,

Just an FYI, attached draft materials for upcoming SRKW Advisory Group meeting on July 30 are being shared with ADMs via Natasha Rascanin today. Neil will raise this for brief discussion on the NHQ-PAC call later today.

Please let us know if you have any questions.

Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Sanders , Michelle [mailto:michelle.sanders@tc.gc.ca]
Sent: 2018–July-22 7:36 PM
To: Webb, Cheryl; Thomson, Andrew; Myers, Yvette; gwen.goodier@canada.ca
Cc: Harber, Lee; 'mary-ann.spicer@canada.ca'; Henneman, Sonja; Winfield, Nicholas
Subject: SRKW Indigenous and Multi-stakeholder Advisory Group DRAFTS

All,
Attached are the versions that Natasha will be sending out to ADMs. As flagged earlier today, she asked that we remove the Purpose clause in the ToRs as she found it redundant with the Objectives, and felt it took it a little further than she was comfortable with re "recommendations". If you feel strongly about having the purpose clause in there I would flag it to your respective ADMs to raise on the call on Monday. That is the only substantive change. Otherwise these should reflect our discussions on Friday.

Thanks,
Michelle

Michelle Sanders
A/DG, Environmental Policy /
DG p.i, Politiques environnementales
613-949-2753 (w) / [redacted] (bb)

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Southern Resident Killer Whale

Indigenous and Multi-stakeholder Advisory Group

Terms of Reference

[DRAFT July 23, 2018]

1. BACKGROUND

As identified at the October 2017 Symposium for the Southern Resident killer whale (SRKW) and the recent *Whales Initiative* technical briefing and roundtable discussion on June 22, 2018, this Advisory Group has been established by the federal departments of Fisheries and Oceans Canada, Transport Canada, and Environment and Climate Change Canada to bring together Indigenous groups, multiple stakeholders, and implicated jurisdictions to facilitate communication and coordination of activities to recover SRKW.

This advisory group does not replace the Crown's Duty to Consult and accommodate nor does it replace the regular engagement and consultation on individual initiatives and measures related to SRKW recovery.

2. OBJECTIVES

The main objectives of the advisory group will be to:

a. Provide a forum for the participants to discuss actions underway and planned by federal departments and others to protect SRKW, and to allow participants to provide advice on recovery actions and to share information to help inform government decision-making.

b. Promote dialogue and improve shared understanding of the complexities of SRKW recovery, shared responsibilities, and respective authorities of Advisory Group participants to reduce SRKW threats.

c. Identify opportunities for collaboration and partnership that can advance the collective implementation of the recovery measures identified in the Species at Risk *Action Plan for Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada* (2017) and Oceans Protection Plan *Review of the Effectiveness of Recovery Measures for Southern Resident Killer Whales* (2017), and the measures announced under the federal *Whales Initiative* on June 22, 2018 to promote recovery of the species.

> *Discussion question: Are there specific milestones or deliverables that you would like to identify under these objectives?*

3. GOVERNANCE AND MEMBERSHIP

The Indigenous and Multi-stakeholder Advisory Group will consist of representatives from various Indigenous and stakeholder groups: indigenous communities, Non-Governmental Organizations (NGO), the shipping and marine transportation, fishing, and whale watching sectors, the Government of British Columbia, and Metro Vancouver Regional District.

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The Advisory Group will be chaired by the Regional Director General of Fisheries and Oceans Canada (DFO), with ex-officio participation of senior officials from DFO, Transport Canada, and Environmental and Climate Change Canada.

The Advisory Group secretariat will report out on the discussions that were held and the recommendations made, noting the degree of support or divergence among members for advice on different issues.

If a member of the Advisory Group is unable to attend a meeting an alternate participant may attend on their behalf. Additional observers are welcome to listen to discussions however participation is limited to members or designated alternates.

The Advisory Group will refer to other existing technical committees and working groups as needed to address technical questions and issues. If, through discussion, a need or gap is identified, the Advisory Group may consider establishing supporting technical groups for specific purposes.

4. RESPONSIBILITIES OF PARTICIPANTS

Review circulated information.

Participate in meetings or assign alternate to attend.

Engage in open and respectful dialogue, seeking to understand and be understood.

Communicate out to their respective organizations/communities the activities and outcomes of this Advisory Group.

5. MEETING PROCESS

The Advisory Group is anticipated to meet up to 4 times per year however this may be adjusted by the chair, if needed. Teleconferencing and video conferencing will be used where possible to minimize travel demands.

Discussion question: How often should this group meet?

Federal departments will provide secretariat services to support meeting delivery and the preparation of summary meeting notes.

Advisory group participants will be invited to propose topics for future meetings. Agendas will be approved by the chair.

Discussion question: What do you feel should be a priority topic on future agendas?

6. REPORTING

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The Chair will disseminate meeting summary notes through the federal secretariat to this Advisory Group.

Individual participants of this Advisory Group will also report back to their respective organizations.

The Chair/secretariat will provide draft meeting summary notes that include a record of recommendations and follow up actions to all participants within two weeks of the meeting. The Advisory Group will have 2 weeks to review summary notes prior to their finalization.

7. LINKAGES

The Advisory Group may be informed and advised by other various and already established SRKW working groups and committees, which are generally threat-based. A list of other currently active groups is provided at Annex B.

Discussion Question: Are there other relevant or related working groups or discussion forums that should be included in this table?

DRAFT

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Annex A: Participant List

Sector	Name	Position	Affiliation	E-mail
Indigenous representatives			UBC	
			First Nations Summit	
			FNFC	
			FNFC	
			FNFC	
NGOs			Raincoast Conservation Foundation	
			Georgia Strait Alliance	
			WWF Canada	
			David Suzuki Foundation	
			Natural Resources Defence Council	
			Vancouver Aquarium [Oceans Wise / CORI Team]	
Shipping Industry			Port of Vancouver	
			Shipping Federation of Canada	
			Chamber of Shipping	
			Canadian Ferry Association	
Fishing Industry			Sport Fishing Advisory Board	
			BC Seafood Alliance	
Whale Watching			Pacific Whale Watching Association	

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Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca
Municipal Government			City of Vancouver	
Federal government	Rebecca Reid	Regional Director General, Pacific Region	DFO	Rebecca.Reid@dfo-mpo.gc.ca
	Carmel Lowe	Regional Director, Science, Pacific Region Science	DFO	Carmel.Lowe@dfo-mpo.gc.ca
	Andy Thomson	Regional Director, Fisheries Management	DFO	Andrew.Thomson@dfo-mpo.gc.ca
	Sylvie Lapointe	ADM, Fisheries and Harbours Management	DFO	Sylvie.Lapointe@dfo-mpo.gc.ca
	Michelle Sanders	Director, Clean Water Policy	TC	Michelle.Sanders@tc.gc.ca
	Megan Nichols	Director General, Environmental Policy	TC	Megan.Nichols@tc.gc.ca
	Yvette Myers	Executive Director, Oceans Protection Plan	TC	Yvette.Myers@tc.gc.ca
	Marc D'Iorio	DG, Industrial Sectors, Chemicals, and Waste Directorate	ECCC	Marc.diorio@canada.ca
	Cecilia Wong	Senior Ecosystem Scientist	ECCC	cecilia.wong@canada.ca

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Annex B: Existing Working Groups/Committees			
Name of engagement activity	**Description**	**Purpose**	**Contact Person**
SRKW committee	Developed from need to have more engagement with First Nations and stakeholders around management measures for SRKW to reduce threat of prey availability and secondarily disturbance	ToR being drafted; but generally provide for engagement with First Nations and Stakeholders to discuss and get input on management actions for SRKW related to abating threat of reduced prey availability	
Canada-United States			
Toxics Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. Toxics working group formed as one of the three to support the Task Force.	Identify, research, and analyze potential actions for consideration.	
Vessels and Noise Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. The Working Group on Vessels and Noise reports to the Washington State Southern Resident Killer Whale Task Force	To develop recommendations on actions to reduce physical and acoustic disturbance impacting SRKW.	
Prey Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of	Identify range of actions to be considered to abate threat of reduced prey availability within Habitat, Harvest, Hydro, Hatcheries, Predations; prioritize, identify conflicts and synergies and deliver refined set of actions to Task Force to be considered in	

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	Southern Residents and necessary to secure a healthy and sustained population for the future. Prey working group formed as one of three to support the Task Force.	final report due Nov.1 2018	
Salish Sea Transboundary Ecosystem Indicators (TBI) Project	The TBI project is led by Environment and Climate Change Canada (ECCC) and the United States Environmental Protection Agency (US EPA) to characterize the state of ecosystem health in the Salish Sea (overlaps with SRKW critical habitat) and convene subject experts to identify threats and responses to concerning trends. Ten indicators are tracked including SRKW abundance, toxics in the food web and chinook abundance. A public facing website supports communication of project outcomes.	The TBI project is a commitment under the ECCC - US EPA Statement of Cooperation to share information and foster collaboration on priority issues in the Salish Sea ecosystem.	
DFO/ National Oceanic and Atmospheric Administration prey working group	Group that has organized workshops to review and understand the science on prey availability for SRKW and identify potential management action.		
SRKW and Underwater Vessel Noise			
Enhancing Habitat Cetacean Observation (ECHO) Advisory Working Group (AWG)	The ECHO AWG brings together a broad spectrum of interests from Canada and US to address threats to at-risk whales.	The role of the AWG is to provide the ECHO program management team with input, advice and recommendations during the development and execution of the program's projects and initiatives.	
Enhancing Habitat Cetacean Observation (ECHO) Vessel Operators Committee (VOC)	The ECHO VOC was established in December 2016 to provide the ECHO Program team with advice, support and guidance pertaining to potential mitigation options that may directly impact the shipping industry.	To bring key stakeholders together to develop mitigation options to reduce underwater vessel noise	
Ship Noise Mitigation Risk Assessment	The Ship Noise Mitigation Risk Assessment was commissioned by Transport Canada to assess and quantify the navigation safety risks associated with introducing or	The purpose of the stakeholder engagement sessions was to present the results of the TC commissioned risk assessment, and seek feedback	

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	implementing potential mitigation measures to address underwater noise in the Salish Sea.	from key industry stakeholders, First Nations and US Tribes in the Salish Sea region.	

*** While the Government of Canada is actively participating in the sub-working groups in terms of information sharing and identifying opportunities for collaborations, it is only an observer on the Task Force and will not be part of recommendations made to the Governor.**

DRAFT

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SOUTHERN RESIDENT KILLER WHALES
INDIGENOUS AND MULTI-STAKEHOLDER ADVISORY GROUP

AGENDA – [Internal - Annotated]

Monday July 30, 2018 9:30 am- 12:30 pm
Location: 401 Burrard St. Room
2nd Floor, Boardroom C and D

Time	Agenda Item	Objective & Materials	Presenter(s)
9:30AM – 9:45AM *(15 mins)*	**Welcome, Opening Remarks & Introductions** • Opening Remarks • Review Agenda • Ratify Summary Report from first meeting	Materials: 1. Draft Agenda 2. Speaking points	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region
9:45AM-10:45AM *(1 hour)*	**Review draft Terms of Reference** **Discuss Forward Agenda** Areas for consideration: 1. Compliance with recovery Measures 2. Setting Targets (short & long term) 3. Updates from federal departments on measures being implemented to address key threats (DFO/TC/ECCC) 4. Other areas of interest identified by participants	Objective: Review draft Terms of Reference & discussion a priority areas for discussion in supporting the establishment of a forward agenda Materials: 1. Draft Term of Reference	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region Discussion with input from all participants
10:45AM-12:15PM *(1.5 hours)*	**Updates / Recent Developments** 1. Update on amended Marine Mammal regulations 2. Update on New Critical Habitat under Amended RKW recovery strategy 3. Lateral Displacement in Strait of Juan de Fuca / Vessel Slow Down in Haro Strait 4. Science Activities 5. Other updates (non-federal) 6. Opportunity for participants to provide other updates.	Materials: 1. PowerPoint Presentations with Speaking Point Presenters on each of the updates. [will not be shared with participants] 2. Hand-out's on updates (as required)	Update 1: Andy Thomson, Regional Director, Fisheries Management, DFO Update 2: Cheryl Webb, Regional Director, Ecosystem Management, DFO Update 3: Michelle Sanders, A/Regional Director General, Environmental Policy, TC and ECHO Update 4: Carmel Lowe, Regional Director, Science, DFO
12:15AM – 12:30PM *(15 mins)*	**Closing Remarks** ○ Next Steps ○ Action Items	Objectives: Identify next steps & action items	**Chair: Rebecca Reid** Regional Director General, DFO – Pacific Region

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Dozie, Juachi

From: Bate, Dan
Sent: July-24-18 2:29 PM
To: Harber, Lee
Cc: Davis, Neil; Thomson, Andrew
Subject: RE: SRKW speech - Monday July 30

Thanks Lee – tracking through Ottawa [redacted]

Dan

From: Harber, Lee
Sent: July-24-18 12:40 PM
To: Bate, Dan
Cc: Davis, Neil; Thomson, Andrew
Subject: RE: SRKW speech - Monday July 30

Hi Dan,

It is an Indigenous and multi-stakeholder advisory group (participant list attached). We have also developed a draft ToR (attached), agenda (attached), and report from the June 22 technical briefing/round-table that was held post Whales Initiative Announcement in Vancouver. There will be several updates from federal departments at the meeting on recovery measures being implemented, review of ToR and also a discussion what the priority areas are for discussion at future meetings.

Happy to provide more info / discuss just let me know what you need.

lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Bate, Dan
Sent: 2018–July-24 12:23 PM
To: Harber, Lee
Subject: SRKW speech - Monday July 30

Hi Lee – Andy came to chat with me about an upcoming SRKW meeting on Monday morning [redacted]

Can you share details of this meeting.. is it stakeholders and program?

Dan

Dan Bate

A/Regional Director, Communications

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Fisheries and Oceans Canada Pacific Region / Canadian Coast Guard / Government of Canada
Dan.Bate@dfo-mpo.gc.ca / Tel: (604) 775-8809 / Cell:

A/Directeur régional des communications
Pêches et Océans Canada, région du Pacifique / Garde côtière canadienne / Gouvernement du Canada
Dan.Bate@dfo-mpo.gc.ca / Tél : (604) 775-8809 / Tél. cell. :

s.16(2)

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Khanna, Sukriti

From: Harber, Lee
Sent: July-24-18 5:02 PM
To: Thomson, Andrew
Cc: Davis, Neil
Subject: follow up invite - draft
Attachments: Follow up invitation - July 30 - SRKW Advisory Group from Regional Director General.docx; participant list - July 30.docx

Hi Andy,

Just teeing up a few items as we gear up to send out materials tomorrow. Please see attached draft invite for your review. I've also attached the updated participant list.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

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Fisheries and Oceans Canada

Pêches et Océans Canada

s.16(2)
s.19(1)

Regional Director General
Pacific Region
Suite 200 – 401 Burrard Street
Vancouver, British Columbia
V6C 3S4

Directrice générale régionale
Région du Pacifique
Piéce 200 – 401 rue Burrard
Vancouver C.-B.
V6C 3S4

Your file *Votre reference*
Our file *Notre reference*

2018-501-00069

[redacted] Researcher, University of British Columbia
[redacted]

Dear [redacted]

On behalf of Fisheries and Oceans Canada (DFO), Transport Canada (TC), and Environment and Climate Change Canada (ECCC), I would like to thank your interest in participating in our upcoming Southern Resident Killer Whale (SRKW) Indigenous and Multi-Stakeholder Advisory Group meeting on July 30, 2018.

This meeting will be an opportunity to formally establish the Advisory Group, provide updates on current recovery measures underway, and collectively identify priority areas for discussion at future meetings.

At this time, I would also like to invite you to propose any items that you would like present at the meeting we will add this to the agenda. Please submit any items that you wish to provide an update on by Friday July 27 to Lee.Harber@dfo-mpo.gc.ca.

Meeting date, time, and location: Monday, July 30, 2018, 9:30am to 12:30pm at 401 Burrard Street, Vancouver, BC, 2nd floor, Boardroom 2C and 2D.

Please note that the meeting has been extended from 2 hours to 3 hours in duration.

If you are unable to attend in person, a teleconference option is available:

Telephone Number: 1-877-413-4790
Conference ID: [redacted]

Canada

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Meeting Overview:

The meeting will begin with introductions and a review of the meeting agenda and the ratification of the summary report from the June 22nd technical briefing and roundtable discussion. Federal officials will then provide update on a few of the recovery measures that are currently being implemented. Next we will review the draft Terms of Reference for the Advisory Group and also have a discussion on a proposed forward agenda.

Please find attached a detailed meeting agenda that provides additional details on the structure of the meeting.

We continue to seek your input and experience in designing a process that will serve as an effective and efficient forum for communication and collaboration.

I look forward to working with you.

Sincerely,

Rebecca Reid
Regional Director General
Pacific Region

cc: M. Sanders, Transport Canada
M. Nichols, Transport Canada
M. D'Iorio, Environment and Climate Change Canada
C. Wong, Environment and Climate Change Canada

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Sector	Name	Position	Affiliation	E-mail
Indigenous representatives	[redacted]	[redacted]	UBC	[redacted]
			First Nations Summit	
			FNFC	
			FNFC	
			FNFC	
NGOs			Raincoast Conservation Foundation	
			Georgia Strait Alliance	
			WWF Canada	
			David Suzuki Foundation	
			Natural Resources Defence Council	
			Vancouver Aquarium [Oceans Wise / CORI Team]	
Shipping Industry			Port of Vancouver	
			Shipping Federation of Canada	
			Chamber of Shipping	
			Canadian Ferry Association	
Fishing Industry			Sport Fishing Advisory Board	
			BC Seafood Alliance	
Whale Watching			Pacific Whale Watching Association	
Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca

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	Jennifer McGuire (alternate)	Assistant Deputy Minister	Environmental Sustainability Division	Jennifer.McGuire@gov.bc.ca
Municipal Government			Metro Vancouver Regional District	
Federal government	Rebecca Reid	Regional Director General, Pacific Region	Fisheries and Oceans Canada	Rebecca.Reid@dfo-mpo.gc.ca
Federal government	Carmel Lowe	Regional Director, Science, Pacific Region Science	Fisheries and Oceans Canada	Carmel.Lowe@dfo-mpo.gc.ca
Federal government	Andy Thomson	Regional Director, Fisheries Management	Fisheries and Oceans Canada	Andrew.Thomson@dfo-mpo.gc.ca
Federal government	Sylvie Lapointe	ADM, Fisheries and Harbours Management	Fisheries and Oceans Canada	Sylvie.Lapointe@dfo-mpo.gc.ca
Federal government	Michelle Sanders	Director, Clean Water Policy	Transport Canada	Michelle.Sanders@tc.gc.ca
Federal government	Megan Nichols	Director General, Environmental Policy	Transport Canada	Megan.Nichols@tc.gc.ca
Federal government	Yvette Myers	Executive Director, Oceans Protection Plan	Transport Canada	Yvette.Myers@tc.gc.ca
Federal government	Marc D'Iorio	Director General, Industrial Sectors, Chemicals, and Waste Directorate	Environment and Climate Change Canada	Marc.diorio@canada.ca
Federal Government	Cecilia Wong	Senior Ecosystem Scientist	Environment and Climate Change Canada	cecilia.wong@canada.ca
Federal Government	Helen Davies	Field Unit Superintendent Coastal BC	Parks Canada	Helen.Davies@pc.gc.ca

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s.21(1)(a)

s.21(1)(b)

Mbarushimana, Jenny

From: Shaikh, Sharlene
Sent: July-25-18 10:21 AM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: RE: Draft Response Letter - RKW RSa for review
Attachments: Draft Response_RKW RSa_to HB.doc

Here's a version with the tracked changes accepted. You can hide the comments as needed.

From: Shaikh, Sharlene
Sent: July-25-18 10:19 AM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: Draft Response Letter - RKW RSa for review

Hi Heather,

The draft response is attached.

Page One is the basic text to be included in all letters.

Thanks,
Sharlene

Sharlene Shaikh
Biologist, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
sharlene.shaikh@dfo-mpo.gc.ca
Tel: 604-666-3811

Pages 714 to / à 716
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

s.21(1)(a)

s.21(1)(b)

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Wong, Eva

From: Shaikh, Sharlene
Sent: July-25-18 3:41 PM
To: Leslie, Karen
Cc: Brekke, Heather; Jones, Lisa Ann
Subject: Letter Response - RKW RSa for review
Attachments: Template Response_RKW RSa_25Jul18.doc

Hi Karen,

Please find attached a response we have drafted for the letters we have received as part of the External Review of the RKW RSamendment.

It includes a one pager with the key points that would be the basis for all letters. Could you please review the letter and

[redacted]

Please let me know if you have any questions.

Best,
Sharlene

Sharlene Shaikh
Biologist, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
sharlene.shaikh@dfo-mpo.gc.ca
Tel: 604-666-3811

Pages 718 to / à 722

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

s.21(1)(a)

s.21(1)(b)

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Wong, Eva

From: Jones, Lisa Ann
Sent: July-25-18 2:00 PM
To: Brekke, Heather; Fershau, Jonathan; Shaikh, Sharlene
Subject: FW: External Review of Draft Recovery Strategy
Attachments: Recovery Strategy Amendment letter_WCVI July 11 2018.pdf

We will see what we hear back

Cheers
Lisa

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: July-25-18 1:45 PM
To: Jones, Lisa Ann
Subject: FW: External Review of Draft Recovery Strategy

Hi Lisa.
I don't think we can assume that the writer didn't received a "Thanks...I've forwarded" response. I am checking in with Ottawa to confirm, but we went back and forth with them on a referral letter, so I'm pretty sure they're sending one.

I am assuming that the mechanism they are using to forward the letter to you is what is different from what we expected—that they're sending the email as below rather than just copying you on their response.

I'll let you know when I hear back.

Candace

From: Jones, Lisa Ann
Sent: Wednesday, July 25, 2018 1:35 PM
To: pac.prmc / pac.urpcm (DFO/MPO)
Cc: Shaikh, Sharlene
Subject: FW: External Review of Draft Recovery Strategy

Hi Candace,

So we just got this into our SARA inbox. This seems to indicate that they (Minister office) have not sent out any notification to the respondent to indicate that they have referred this letter on to PAC SARA and are not planning on doing so.

Can you clarify.....would your group be sending this type of notification? Or do we (PAC SARA) need to send a 'thank you for your letter, a more fulsome reply to your letter is pending' given we won't have letters out until next week.

Cheers
Lisa

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From: PAC-SARA / LEP-PAC (DFO/MPO)
Sent: July-25-18 12:49 PM
To: Shaikh, Sharlene
Cc: Jones, Lisa Ann; Brekke, Heather
Subject: FW: External Review of Draft Recovery Strategy

Information only, as the need for a Pacific response is noted in the tracking sheet.
Response now actioned to Pacific. Note that it does not appear that NHQ is sending a "Thank You...detailed response forthcoming from Pacific Region" letter to senders.

Jonathan

From: Minister / Ministre (DFO/MPO)
Sent: July-25-18 11:05 AM
To: PAC-SARA / LEP-PAC (DFO/MPO)
Subject: FW: External Review of Draft Recovery Strategy

The following correspondence was received at min@dfo-mpo.gc.ca, the departmental email address for the Minister of Fisheries, Oceans and the Canadian Coast Guard. It is being sent to you for your action, as appropriate. No further action on this correspondence will be taken by the Ministerial Correspondence Control Unit.

Thank you.

Ministerial Correspondence Unit
Fisheries and Oceans Canada / Government of Canada
MCCU Analyst Group: XNCR-GrpCA/AC@dfo-mpo.gc.ca

La correspondance suivante a été reçue à min@dfo-mpo.gc.ca, l'adresse électronique du ministre des Pêches, des Océans et de la Garde côtière canadienne. Elle vous est transmise afin que vous preniez les mesures appropriées. Aucune autre mesure ne sera prise par l'Unité du contrôle de la correspondance ministérielle à l'égard de cette correspondance.

Merci.

Unité de la correspondance ministérielle
Pêches et Océans Canada / Gouvernement du Canada
Groupe analyste d'UCCM: XNCR-GrpCA/AC@dfo-mpo.gc.ca

From: [redacted]
Sent: July-11-18 7:48 PM
To: ec.ministre-minister.ec@canada.ca; Minister / Ministre (DFO/MPO)
Cc: Brekke, Heather; McMillan, Christie; PAC-SARA / LEP-PAC (DFO/MPO)
Subject: External Review of Draft Recovery Strategy

Hello Ministers McKenna and LeBlanc. Thank you for your consideration of the attached letter that has been sent on behalf of:

- West Coast Aquatic Governance Board
- West Coast Fishing Guides Association
- Alberni Sport Fish Advisory Committee

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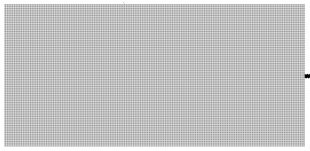
- Area G Trollers Association
- BC Commercial Fishing Caucus

We look forward to your response.

Sincerely,



West Coast Aquatic
Cell
www.westcoastaquatic.ca
www.roundtables.westcoastaquatic.ca
https://marineguide.ca

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Wong, Eva

From: Jones, Lisa Ann
Sent: July-25-18 5:38 AM
To: Brekke, Heather
Subject: FW: Agenda & Materials: SRKW Prey Working Group Meeting #3
Attachments: Prey WG #3 Participant Agenda 7_20_18.docx; Habitat_OutputsWGs_Considerations for Evaluating Potential Actions_7_20_18.docx; Harvest_OutputsWGs_Considerations for Evaluating Potential Actions_7_20_18.docx; Hatchery_OutputsWGs_Considerations for Evaluating Potential Actions_7_20_2018.docx; MASTER Hydro_OutputsWGs_Considerations for Evaluating Potential Actions_20July2018.docx; Pred_OutputsWGs_Consid for Eval Potential Actions_20July2018.DOCX

Morning Heather,

Here are the files that relate to each of the components this prey working group has been broken down into: habitat, hatchery, harvest, hydro and predation. Each doc is basically a summary of the main options being talked about for that component and will be put forward to the Task Force after this meeting today where we are reviewing all docs.

Monitoring and enforcement, fishing closures with disturbance minimized (eg no whale watching), license whale watching are all good places to start.

I will think more on plane about this and will add anything more before your meeting.

Cheers
Lisa

From: Becker, Penny A (DFW) [mailto
Sent: July-20-18 6:25 PM
To: PALAZZI, DAVID (DNR); Tom M. Chance; Lisa A. Wilson; Martin, Steve (GSRO); Hughes, Kirt M (DFW); office@nsiafishing.org; Falkenburg, Nelson (DFW); Jones, Lisa Ann; Good Stefani, Giulia; ; Culver, Michele K (DFW); Clements, Shaun; Robb Krehbiel; Casey Baldwin (FNW); Crosier, Raquel D (DFW); Blackmore, Laura (PSP); Kendra Smith
Subject: Agenda & Materials: SRKW Prey Working Group Meeting #3

Hello All,
We look forward to seeing you all at our meeting on Wednesday July 25 at 9am in Room 172 of the Natural Resources Building in Olympia. Please see the attached agenda for our game plan for the day. Also attached are the latest versions of the considerations matrices for the 4Hs and P. Please review these documents ahead of our discussions on Wednesday. We will need to collect as much information and perspectives for these potential actions as possible and turn that info around right after our meeting to get it to the Task Force. Please also think about how the actions within the 4Hs and P might connect/rely upon to each other as we'll chat about this at our meeting.
All of these documents are also available in our Box folder.
If you have any questions please let us know,
Penny, Steve and Abby

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Penny A. Becker, Ph.D.
Washington Department of Fish and Wildlife
600 Capital Way North
Olympia WA 98501
Office: 360-902-2694

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Considerations for Evaluating Potential Actions
SRKW Prey Working Group to Task Force

Harvest

Overall notes – What has been the effectiveness of harvest management to date? The NMFS BiOp for Puget Sound fisheries (May 2018) suggests the number of Chinook available varies by time and area, but ranges from 9 to 28 times the amount needed to meet SRKW daily prey energy requirements; however, what is not known is the prey density needed for SRKW. Regarding harvest, though, the number of Chinook removed through WA fisheries (i.e., under our direct authority) is relatively low (i.e., around 5% or less). Is it worth trying to limit it further? Need to make sure we are separating the effects of vessel noise vs. the effects of taking fish.

How is a possible increase of hatchery production going to interface with harvest? What are the consequences of increasing availability of salmon to the whales given the current management regime? Who other than the whales will have access to increased abundance? What else needs to be modified?

There is a general agreement among prey WG members that harvest might not be the best place to have an impact on whales. The pre-terminal harvest has been so limited that there isn't a whole lot that can be done locally (WA/OR). Stock specific tweaking in marine waters that is approved by the co-managers likely wouldn't be affected by changes in abundance. Instead, there may be opportunities to increase freshwater harvest in order to remove additional hatchery production.

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Is there a way to determine the optimal amount of fish for people and whales? We are limited by the information available and the unpredictability associated with the changing environment. We need a numeric goal – how many more Chinook in the ocean during certain times of year? All attempts at that number rely on assumptions and correlations. Also need to consider location, density, etc. For Lummi, the goal is to get back to a similar situation as the 1980s. If we knew month by month what was needed, the dials would be easier to turn effectively.

Harvest of forage fish is considered across all of the 4-H's and P.

Need to address chum in addition to Chinook.

Overarching concern – main impact from fisheries in AK and BC (depends on stock). Chinook annex is being finalized now – this will provide predictability for the next 10 years.

Any lessons that can be learned from other fisheries close to collapse? Lobster, cod, sturgeon, etc.

Action A

Action, including time and place for implementation	**Effectiveness**		**Affordability**		**Ease of Implementation**	
Limit harvest in areas important to SRKW foraging (Action 1 in Output document) There used to be hot spot foraging areas (west side of San Juan Islands) – these are shifting. This action may not be easy to implement as the whales are no longer predictable.	H/M/L Low	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • Low – Sport fishery in Marine Area 7; 3500 fish. *Need to include recent year information in the*	H/M/L: Low	Brief explanation of rating: Estimated cost to implement (in dollars): • High (cost to fisheries – economic cost, cultural cost) • Low implementation cost	H/M/L Low	Brief explanation of rating: Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Impossible to implement with co-managers? Case law would not support. • Tribal treaty rights concerns

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Canada has just implemented this action – may want to better understand why they thought this would work. Again – for this action, it is important to distinguish between vessel noise and the taking of Chinook.		*total Chinook in the Salish Sea – pull from the FRAM.* Time for response to occur: • Immediate (0-3 years) Degree of certainty: • Low		Degree of certainty: • High		• May require WDFW Commission policy change Degree of alignment with current federal and state law (versus requiring changes to laws): • Low alignment due to treaty rights Political/social feasibility: • North of Falcon fishing season setting is already challenging Technical feasibility: • SRKW locations won't overlap nicely with current Marine Areas. Degree to which it reinforces or leverages existing efforts: • Existing efforts are underway in Canada – look to see if they are effective Degree of certainty: • There is low certainty that this would be politically or even legally feasible with the co-management framework.

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset
  All pods though recent years would suggest that the "hot spots" are no longer easy to predict. Whale behavior is changing.

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Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action

- Severity of threat being addressed

- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)

- Links to existing programs, communities, groups, or mechanisms

- If and how each action could be evaluated, monitored and responsive to adaptive management

- Does the action take climate change into account and if so how?

- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
  Further limiting fisheries in certain areas has equity implications associated with treaty rights and the co-management model. It would disproportionately affect some tribes.

- Comments on current and potential funding sources and estimated gaps
  This is technically feasible and isn't costly to implement. There would be costs associated with lost income for fishers.

- Additional considerations unique to Working Group, if appropriate:_____

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Action B

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Subsidize fishers to not fish (buyback program; Action 2) – Commercial fishers across all marine areas and recreational charter. For the sport fishery in general there is no mitigation that has occurred in the past. **This action would likely be focused on the pre-terminal Puget Sound areas. It could be implemented immediately.**	H/M/L Low	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • Low • Low – Sport fishery in Marine Area 7; 3500 fish. *Need to include recent year information in the total Chinook in the Salish Sea – pull from the FRAM.* • *Describe the total magnitude of harvest – Nov. Harvest workshop* Time for response to occur: • Immediate (0-3 years) Degree of certainty: • Medium in biggest stocks (can use abundance index to predict in biggest stocks)	H/M/L: Low	Brief explanation of rating: Long-term cost to WDFW and feds would be substantial—would need to accurately project revenue impacts Estimated cost to implement (in dollars): • 2008 – U.S. federal government in implementation of the US – Canada Pacific Salmon Treaty paid millions of dollars to Canada ($30M to reduce fleet size) and Alaskan ($15M mitigation for reduced harvest) commercial fishers Degree of certainty: • High	H/M/L Low	Brief explanation of rating: Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Again, very difficult to implement with tribal fishers as the right to harvest has cultural value as well as economic value. Can't "buy back" ability to practice cultural and spiritual traditions. Degree of alignment with current federal and state law (versus requiring changes to laws): • There is precedent but only with northern fisheries Political/social feasibility: • Treaty tribes will not allow rights to be "bought back" – this is not an option for tribal fishers. • Recreational fishers may not participate. No mechanism for subsidy for general anglers, though may be able to achieve something for charter/guides or local economies. Technical feasibility: • High

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						Degree to which it reinforces or leverages existing efforts: • Low Degree of certainty: • High

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset
  All pods.

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management

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- Does the action take climate change into account and if so how?

- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
  This could potentially help commercial fishermen offset economic loss. However, it will likely not satisfy recreational fishers. The treaty tribes will not accept payment for the inability to practice their culture.

- Comments on current and potential funding sources and estimated gaps
  This has been done as part of the Pacific Salmon Treaty in the past - 30 million USD was paid to Canada for use in fleet reduction following 2008 agreement. 15 m USD was provided to SE AK as mitigation for a harvest reduction they took under the agreement, but that did not include fleet reduction as a condition (nor was it used for that purpose). There is currently no funding in place to provide the buyback monies. Would actions needed to support SRKW meet qualifications for Federal funding under fisheries natural disaster clauses?

- Additional considerations unique to Working Group, if appropriate:_____

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Action C

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Apply mark selective harvest of Chinook (more selective, less non-selective; Action 4) in order to better protect wild stocks This is already happening in the US. This is focused on getting Canada to more effectively mark hatchery fish in order to protect wild fish productivity. WHERE?	H/M/L Low	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • Low? Time for response to occur: • Immediate (0-3 years) Degree of certainty: • Conflicting catch-and-release mortality findings	H/M/L: Low	Brief explanation of rating: Estimated cost to implement (in dollars): This is already done and is expensive – would be costly to expand efforts Degree of certainty: • High	H/M/L High	Brief explanation of rating: There are few implementation issues – but this likely would be very expensive and the effectiveness is low. There is not a good direct link to whales. Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • No regulatory feasibility issues Degree of alignment with current federal and state law (versus requiring changes to laws): • No alignment problems Political/social feasibility: • No political/social feasibility issues Technical feasibility: • High - costly Degree to which it reinforces or leverages existing efforts: • Expanding current efforts Degree of certainty: • Low

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Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset
  TO BE COMPLETED

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management
- Does the action take climate change into account and if so how?
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed

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- Comments on current and potential funding sources and estimated gaps
- Additional considerations unique to Working Group, if appropriate:_____

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Action D

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Reduce non-targeted fisheries' impact on salmon, including limiting gear types that increase mortality and by-catch (Action 5) Focused on trawl fisheries in pacific and north pacific that intercept Chinook (mid-water targeting hake or similar species) This action does not include forage fish – that would be under the integrated forage fish action.	H/M/L Medium	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • Medium Time for response to occur: • Immediate (0-3 years) Degree of certainty: • There is a NMFS Biological Opinion that was just updated in December 2017 addressing the bycatch of salmon (chinook and coho) in West Coast groundfish fisheries (including hake/whiting trawl). The trawl fisheries are 100% observed and observers collect coded wire tag samples to determine the origin of salmon bycatch. The occurrence of bycatch events, particularly in the	H/M/L: Medium	Brief explanation of rating: Estimated cost to implement (in dollars): • Possibly high – The economic value of these fisheries is in the billions – fishers wouldn't want to risk targeted harvest to save a few Chinook • Costs of reduced fisheries would be much more of an effect than improved bycatch mitigation or avoidance might be. Research could be costly (M) Degree of certainty: • Low	H/M/L Medium	Brief explanation of rating: Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • WDFW Commission policy change may be required • Need to work via Regional Fishery Management Council (NPFMC and PFMC) processes who manage these fisheries. • Want excluder device requirement – need better designs for equipment • Difficulty in requiring a specific design or device is that one size does not fit all, and maintaining the flexibility for individuals to experiment and find the configuration that works best for them is important for fishery viability Degree of alignment with current federal and state law (versus requiring changes to laws): • New by-catch goals were just set with the pacific fisheries Political/social feasibility: • High if $$$ is provided Technical feasibility:

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		whiting fishery, is difficult to predict and is considerably lower what the salmon fisheries catch. The groundfish trawl fisheries are closely monitored with real-time catch information, and include prescribed harvest limits and measures (e.g., time and area closures) that can be implemented inseason in the event that bycatch rates and/or numbers are higher than anticipated.				• High if research improves designs Degree to which it reinforces or leverages existing efforts: • Current competition for new innovations that limit by catch Degree of certainty: • Medium

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset
  All pods.

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Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action

- Severity of threat being addressed

- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)

- Links to existing programs, communities, groups, or mechanisms

- If and how each action could be evaluated, monitored and responsive to adaptive management

- Does the action take climate change into account and if so how?

- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
  This action depends on improved innovations in excluder devices and escape hatches in nets to prevent/reduce by-catch of salmon.

- Comments on current and potential funding sources and estimated gaps
  Some efforts are underway but more funding could accelerate progress.

- Additional considerations unique to Working Group, if appropriate:_____

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Action E

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Negotiate reductions in AK and Canadian fisheries to allow more Chinook to reach WA waters (Action 6) The U.S. Pacific Salmon Commissioners are well aware of the chinook interceptions off Alaska and BC and those are major factors in the re-negotiation of the Chinook Annex. Note: The results of the negotiations are being finalized and should be publicly available soon, and are expected to include reductions in chinook harvest for both Alaska and BC over the next 10 years.	H/M/L High	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • Dependent upon amount of reductions and how implemented Time for response to occur: • Long-term (10+ years) Degree of certainty: • High	H/M/L: Low	Brief explanation of rating: Estimated cost to implement (in dollars): • Lost fisheries/economy Degree of certainty: • High	H/M/L Low	Brief explanation of rating: Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • International treaty with no re-opening, negotiated over 10 year period Degree of alignment with current federal and state law (versus requiring changes to laws): • Would have to reopen Chinook annex – right now there is no way to do that. • Plan for next negotiation now. Expand on what this would look like now? Political/social feasibility: • Low Technical feasibility: • High Degree to which it reinforces or leverages existing efforts: • SRKW are being considered in Chinook annex

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						Need to include a summary of actions being included in the re-negotiated treaty and what specific actions are intended to relate to SRKWs. Degree of certainty: • High

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset
  All pods

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Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action

- Severity of threat being addressed

- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)

- Links to existing programs, communities, groups, or mechanisms

- If and how each action could be evaluated, monitored and responsive to adaptive management

- Does the action take climate change into account and if so how?

- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
  Politically difficult. The timing is unfortunate as the Chinook annex is currently being approved. 10-year agreement. Are there any reopening clauses? "Kind of", generally limited to significant issues with a specific salmon stock. To deviate from the treaty would require bi-lateral agreement; all parties would need to have a significant interest in re-evaluating modifications to benefit SRKWs.

- Comments on current and potential funding sources and estimated gaps
  Could depend on buyback programs that were used in the past (see action 2)

- Additional considerations unique to Working Group, if appropriate:_____

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Action F

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Reduce marine harvest and transfer opportunity to terminal fisheries while chinook abundance in increased (Action 7) **Would affect all marine pre-terminal fisheries. An exemption for tribes is not a preferred solution. Recommend not going down the path of allocation debate – we need all the support we can get. What about asking for voluntary adjustments?**	H/M/L Low	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • Depends on action details Time for response to occur: • Immediate (0-3 years) Degree of certainty: • Low	H/M/L: M	Brief explanation of rating: Estimated cost to implement (in dollars): • Economic impacts to fisheries Degree of certainty: • High	H/M/L Low	Brief explanation of rating: Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Tribal treaty concerns – e.g., vast majority of Makah Tribes fisheries are non-terminal • Reallocation inter-tribal. Would disproportionally affect some tribes more than others Degree of alignment with current federal and state law (versus requiring changes to laws): • Co-management might not support this Political/social feasibility: • It is not a 1:1 fish for fish Technical feasibility: • High Degree to which it reinforces or leverages existing efforts: • Never has been tried Degree of certainty: • High

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Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset
  All pods.

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action

- Severity of threat being addressed

- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)

- Links to existing programs, communities, groups, or mechanisms

- If and how each action could be evaluated, monitored and responsive to adaptive management

- Does the action take climate change into account and if so how?

- Recommendations about where and when to implement each action, including sequencing (if not covered above in table)
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
  High economic and social cost. Creates disparity between the treaty tribes. Some tribes are already limited to terminal fisheries (e.g., Stillaguamish) while others depend on 90% pre-terminal fisheries (Makah). Could have the unintended consequence of damaging freshwater production.

- Comments on current and potential funding sources and estimated gaps

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None.

- Additional considerations unique to Working Group, if appropriate:_____

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Action G

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Implement slot size limits to get larger fish on the spawning grounds (put a maximum size limit on catch; Action 9) This would be implemented throughout the Puget Sound, Coast, and Columbia.	H/M/L Low	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • Low/Medium? Time for response to occur: • Long term (10+ years for full implementation) Degree of certainty: • Release mortality and survival data is inconclusive • Not clear where or whether age selective fishing mortality is occurring – troll or sport or net? Biologically, size selection in hatchery programs might provide a larger potential change, on the same time frame	H/M/L: Med	Brief explanation of rating: Estimated cost to implement (in dollars): • Need increased enforcement Degree of certainty: • Low	H/M/L Med	Brief explanation of rating: Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • WDFW Commission policy may be required Degree of alignment with current federal and state law (versus requiring changes to laws): • Political/social feasibility: • Expect significant stakeholder feedback • Require co-manager agreement • In Federal waters - PFMC Technical feasibility: • High Degree to which it reinforces or leverages existing efforts: • Have this on the books in Canada Degree of certainty: • Low

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Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset
  All pods.

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management
- Does the action take climate change into account and if so how?
- Recommendations about where and when to implement each action, including sequencing (if not covered above in table)

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- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
  Would fundamentally change fishing derbies. Fishers would not be happy. It could be difficult to enforce. There could be increases in catch and release mortality. ***As a universal regulation this would be over-reach if goal is to eliminate big fish derbies. Outside of derbies, size selection (beyond minimum size for adults) is likely very uncommon. Canada does have some fisheries with a slot limit for Chinook.***

- Comments on current and potential funding sources and estimated gaps
  No funding id'ed for increasing enforcement.

- Additional considerations unique to Working Group, if appropriate:_____

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Considerations for Evaluating Potential Actions
SRKW Prey Working Group to Task Force

Hatchery

Overview:

In addition to the SRKW TF effort, the legislature tasked WDFW with identifying opportunities to increase production within the WDFW facilities – attached a budget. This project is outside of the TF charge.

Link to presentation on Box

Comments:

- Tribes are doing similar analysis, recognizing that there is no funding to increase production
- Need to check with salmon recovery councils – not just co-managers and NOAA. Councils can help support hatchery production through targeted habitat protection and restoration
- How does this relate to carrying capacity – food availability and habitat area? NOAA is doing to the analysis.
- Would be nice to know what current hatchery stray rates are or comparison of hatchery/wild on spawning ground.
- Need to fully consider how wild stocks are going to be affected – there are big risks
- Net pens are not supported by Washington Salmon Coalition – when adults come back, there is no where for them to go other than the nearest freshwater. Straying becomes an issue in areas that support wild stocks. South sound ok with the exception of Nisqually. South sound has done it in the past. Chinook do well in net pens with the exception of increased predation. Lower Columbia his a history of net pens in off channel areas. Been successful and ODFW will present detail in next meeting. Could this strategy work at the mouth of the Strait of Juan de Fuca? Explore this idea. Net pens could both increase production or could change the way that you diversify life history – just another hatchery tool.

For hatchery, the devil is the details for where production is increased, how it interacts with the wild stocks, and how long the increased production is last.

Next steps for July 25th:

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- Clarify the different kinds of hatchery strays. Not always a bad thing? Some areas have hatchery fish playing a crucial role by spawning on the natural spawning grounds. The largest contributor to a different run and size might be a different stock straying. Increasing fall Chinook at Samish could threaten the Nooksack – it isn't the right stock for that area. Assertion that hatchery fish are always bad is a question. Differing opinions. Native broodstock is the preference.
- What information could be presented on the 25th that would advance this conversation?
    - ODFW net pen program
    - What facilities right now could diversify life history types? Life history changes would need to be vetted through the co-manager process and would require ESA coverage and additional funding for evaluation (additional Coded Wire Tags).
    - What permits would be necessary to accomplish setting up new net pen facilities in the Puget Sound or coast? DNR Aquatic land lease, USACE permit, HPA, NPDES permit, ESA coverage, and maybe County Shorelines permit.
    - Answer questions brought up on July 13 about how hatchery potential compares to the NOAA stocks and overall goal of the 15% increase in prey availability.

Action A

Action, including time and place for implementation	**Effectiveness**		**Affordability**		**Ease of Implementation**	
Increase hatchery production at facilities that most benefit SRKWs (Including completing and/or updating HGMPs and production at hydro mitigation permitted facilities- Actions 2&3 from Output #1) (INSERT GEOGRAPHIC, TIMING, STOCK SPECIFICS TO BE DISCUSSED) Not a lot of agreement on the	H/M/L H – short term but there is definite risk	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • High (compare NOAA information to WDFW potential table?) Time for response to occur: • Intermediate 0-3 Years Degree of certainty: • Short term – certain,	H/M/L: H (Compared to costs of habitat restoration, etc)	Brief explanation of rating: Estimated cost to implement (in dollars): • $110K/1M Chinook • Coho and steelhead more expensive, chum cheaper • Any yearling programs are more expensive Degree of certainty: • High	H/M/L M	Brief explanation of rating: Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Administrative process (coordinate with WDFW/NOAA/Tribes/Regional Salmon Board directors)? Degree of alignment with current federal and state law (versus requiring changes to laws): • HGMPs Political/social feasibility:

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effectiveness of this strategy May want to look at broadening life history strategy approaches – hold Chinook longer (would increase costs) Yearling programs could introduce risk		longer term, depends on the affect on the wild stocks				• Could be expectations that there are increased harvest opportunities with increased production Technical feasibility: • Aligning with regions and technical partners Degree to which it reinforces or leverages existing efforts: • Would need to ensure that any additional hatchery production compliments existing salmon recovery plans and accounts for ecosystem response of additional hatchery fish Degree of certainty: • Question of where this would be most effective

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset
  All pods

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action

- Severity of threat being addressed

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- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management
- Does the action take climate change into account and if so how?
- Recommendations about where and when to implement each action, including sequencing (if not covered above in table)
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
- Comments on current and potential funding sources and estimated gaps

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Action B

Action, including time and place for implementation	**Effectiveness**		**Affordability**		**Ease of Implementation**	
Improve hatchery management by diversifying timing and salmon size to increase survival, reduce competition with natural fish, and potentially avoid predation (INSERT GEOGRAPHIC, TIMING, STOCK SPECIFICS OF WHERE THIS MIGHT BE TRIED)	H/M/L M	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • Unknown • Could increase the benefit of Action A • Could increase abundance even absent increased production Time for response to occur: • Long term? 10+ years for larger impacts (shorter timeline to see results of test on smaller scale?) • Short term survival could decrease Degree of certainty: • Data need regarding: Brood stock management and spawning protocols to increase fish size; timing and location of smolt release to reduce predation and competition with natural fish; rearing strategies to improve survival in natural environment; net pens for endemic stocks Will it change pinniped or bird	H/M/L: M	Brief explanation of rating: Estimated cost to implement (in dollars): • Higher than current Chinook production Degree of certainty: • High	H/M/L M	Brief explanation of rating: Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Administrative process (coordinate with WDFW/NOAA/Tribes/Regional Salmon Board directors)? Degree of alignment with current federal and state law (versus requiring changes to laws): • No issues id'ed Political/social feasibility: • No issues id'ed Technical feasibility: • Need scientific design to test effects on returns, predation, etc. • Disease risk – yearling production of Chinook? • Facility will have to be larger – so technical feasibility depends on the individual facility. Would want to test in a few locations where it is easy before you make changes to current production • Need to work with co-managers, NOAA and salmon recovery regions to understand risk to wild stocks

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		behavior so that they stay to feed all the time? Research will take time. Could a pilot in some hatcheries determine efficacy of limiting predation or would confounding factors limit ability to detect success?				Degree to which it reinforces or leverages existing efforts: • If increases production in the process would need to ensure that any additional hatchery production compliments existing salmon recovery plans and accounts for ecosystem response of additional hatchery fish Degree of certainty: • Low

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset
  All pods?

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Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management
- Does the action take climate change into account and if so how?
- Recommendations about where and when to implement each action, including sequencing (if not covered above in table)
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
- Comments on current and potential funding sources and estimated gaps
- Additional considerations unique to Working Group, if appropriate:_____

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Action C

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Increase forage fish as prey for Chinook (harvest, hatchery, habitat, predator management actions possible; Overarching Action Identified in Several Sub-groups) • Research the production forage fish in hatcheries and/or natural environments (Hatchery Action 4) • Perform habitat restoration and/or artificial habitat for forage fish (Habitat) (DISCUSS ABOUT DIVING INTO THIS IN YEAR 1 OR YEAR 2) Does technology exists to do this? More of a habitat issue than a hatchery issue. Suggest that this is moved to the habitat bin Japanese have had good success with herring hatchery programs.	H/M/L ?	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • Medium Time for response to occur: • Intermediate (3-10 years) Degree of certainty: • Data gap: Feasibility assessment needed. Would be many years from affecting whales	H/M/L: H	Brief explanation of rating: Estimated cost to implement (in dollars): • Degree of certainty: •	H/M/L L	Brief explanation of rating: Would have to start as a research program and the facilities would have to be built. Hoodsport has salt water available. Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Degree of alignment with current federal and state law (versus requiring changes to laws): • Political/social feasibility: • Technical feasibility: • Needs research Degree to which it reinforces or leverages existing efforts: •

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Suggest that there is a research opportunities to see if this feasible – could involve other reproductive interventions						Degree of certainty: •

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management

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- Does the action take climate change into account and if so how?
- Recommendations about where and when to implement each action, including sequencing (if not covered above in table)
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
- Comments on current and potential funding sources and estimated gaps
- Additional considerations unique to Working Group, if appropriate:_____
-

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Considerations for Evaluating Potential Actions
SRKW Prey Working Group to Task Force

Hydro and Dams (structures that impound water)

Emerging issues:

In river transport may need to be added as a new action (July 13 comment) or perhaps it should be referenced in Action B

Provide policy support for Ecosystem based function in Columbia River Treaty Re-Negotiations by identifying SRKW and to help chinook throughout the Columbia Basin

- This is happening now, but it depends on how much the negotiators are hearing the state's voice.
- Interior has committed to giving regions, state, tribes and others – maybe there's some opportunity to express that we're all interested in having them consider SRKW as part of the ecosystem considerations.
- Timeline is not swift. Not all parties are in agreement on the relative negotiating value of ecosystem functions.

Action A – Promote increased "spill" (and total dissolved gas caps to facilitate it) to improve life-cycle survival

Action, including time and place for implementation	**Effectiveness**		**Affordability**		**Ease of Implementation**	
Recommend that Ecology consider adjusting spill regimes and associated gas caps on the Snake and Columbia rivers to allow for additional spill to benefit Chinook salmon and other salmonids.	H/M/L Range of high to moderate (different models range from	Magnitude of benefit to SRKW (quantify if possible): • Moderate to injunction baseline spill (High proportionate to other hydro/dam actions, if you achieve SARs predicted by CSS model) • Few priority stocks reflected in	H/M/L Range of low to high	Estimated cost to implement (in dollars): • Spill: it was noted that $40 million annually (above BiOp) on average for spilling to current 115% forebay/120% tailrace standard; 24/7 spill increase spill to 120% tailrace only standard is estimated to cost another $20	H/M/L High to Moderate	Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Near-term decisions on 2019-21 spill for "interim" FCRPS BiOp • Longer term 2022 FCRPS BiOp will be informed by CRSO NEPA process, which will wind up in 2021. • For FERC (PUD) dams, adaptive

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Applies to the Columbia and Snake River systems; may not apply elsewhere but opportunities for other facilities may exist. ECY could temporarily or permanently adjust gas caps allow for new spill regimes on the mainstem of the Columbia and Snake. Would apply to the whole mainstem below Chief Joseph. Should consider options of WA waiving forebay cap and managing to Oregon's existing standard, as well as both states going to 125%, other options. Also a request to look at in-river transportation alternative to increased spill, especially in very hot, low water years like 2015. Might be part of the technical analysis and debate over efficacy of spill under certain conditions. Comment: In near term, regional federal, state, and tribal salmon managers may	little/no benefit to high benefit)	this geography with uncertainty about value for SRKW. Check the table for these stocks, since that's the model the Prey WG is using now. Time for response to occur: • Immediate after changes are implemented (implementation could occur as early as 2019, with first effects 2-5 years out) Degree of certainty: • Moderate certainty that magnitude of benefit analyzed in Comparative Survival Study can be achieved, depending on approach. High certainty of benefit to juvenile survival broadly and increased prey for SRKW. Does not apply to many of the highest priority stocks so not a silver bullet. Comparative survival study may not clearly show improves smolt survival with increased flow above pre-injunction flows. CSS is a life cycle basis showing that SAR does increase due to a decrease in "delayed mortality" attributed to non-spillway hydrosystem passage. Comment that Interim BiOp and		million, or an average of $60 million total annually. • Flexible timing (market peaks) rather than 24/7 spill could reduce the cost • [Can we generate costs per ratepayer of different spill scenarios? Comment that survey showed ratepayer willingness to pay more to help salmon.] Degree of Certainty: Dependent upon water year, energy markets potential trade-offs with other actions funded by BPA Find report/analysis to help understand the basis for these costs.		management processes through FERC operating plans would be required Degree of alignment with current federal/state law: Varies by dam and legal processes • Increase in spill % above current WA TDG standards would require approval from Ecology Political/social feasibility: • There is opportunity for regional collaboration and some consensus Technical feasibility: • Technically feasible Degree to which it reinforces or leverages existing efforts: • High Degree of certainty: • Unknown

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have some joint recommendations this summer or fall, and recommendations here should recognize the value and relevance of discussions over 2019-2021 operations (Interim FCRPS BiOp) as well as the CRSO NEPA and 2022 BiOp processes in terms of identifying the best spill regime.		regional process then NEPA will inform this action and the taskforce may not want to get too far in the weeds on particulars of spill operations.				

NOTES ON INPUT, COMMENTS AND QUESTIONS FROM TASK FORCE ON THIS ACTION ON 6/14/18:

- For Columbia River dams, quantify the change in revenue to BPA from spill change – also overall economy, extra production.
    - Hydro work group members noted the change in revenue: $40 million annually (above BiOp) on average for spilling to 115%/120% TDG; to increase 24/7 spill to 120% tailrace-only standard is estimated to cost another $20 million, or $60 million total annually. Flexible spill to 120% or 125% TDG that allows for less spill at peak power market times may cost less.
    - At 24/7 115%/120% TDG for Calendar Year 2018: Approximately $30 million
- NEEDS MORE INFORMATION:
    - Impact of raising gas caps on juvenile survival
    - How can dams be reconfigured/re-engineered to increase survival

Additional information (WG Meetings 2 & 3)

- Recommendations about where and when to implement each action, including sequencing (if not covered above in table)
    - Steps to take: Inventory dams and impoundments that block fish passage or otherwise impair salmon survival, overlay with priority areas, and prioritize impoundments and dams to be considered for modification or removal
    - Assess spill levels to maximize survival of juvenile chinook and raise total dissolved gas cap if needed or where appropriate to maximize survival of juvenile chinook
        - Facilitate spilling to less than cap during peak market price times, in order to reduce cost of action.
    - Columbia Basin dam operation and ecosystem service benefits for SRKW should be prioritized in Columbia River Treaty re-negotiation

- Whether each action will improve conditions for all pods or a subset

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- All Pods

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Severity of threat being addressed
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
  - For Bonneville, estimate $40 million annually (beyond current costs) on average for spilling to 115% TDG; to increase spill to 120%, they estimate another $20 million, or $60 million total annually. Depends on water year and energy markets, as well as flexibility of spill regime
    - At 115% TDG for Calendar Year 2018: $30 million
  - Flexible timing (reducing spill during market peaks) rather than 24/7 spill would substantially reduce or eliminate this cost and potentially still offer juvenile survival benefits
  - For Bonneville, how might a cost increase associated with spill be allocated across ratepayers in the service area?
  - For PUDS, costs of spilling to higher TDG caps?
- Comments on current and potential funding sources and estimated gaps
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management
- Does the action take climate change into account and if so how?
- Additional considerations unique to Working Group, if appropriate:_____

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Action B – Update and adopt appropriate standards for juvenile salmon survival

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Regional partners review, and where appropriate, revise standards for juvenile survival Need to list places where this is an opportunity, particularly outside of the Columbia system. Might make it more digestible, geographically. Existing standards will be challenging to revise (and may not need revision). It's fair for the Task Force to understand that the metric for the performance standard is a debate.	H/M/L Moderate	Magnitude of benefit to SRKW (quantify if possible): • High Time for response to occur: • Analysis and adoption, construction, operation changes, and adaptive management after regulatory adoption of new standards, then additional time for fish return (5-15 years depending on complexity of passage) Degree of certainty: • Moderate Effectiveness depends on whether the current standards are high enough, and whether they're being met. There may not be much room for improvement, varying from site to site.	H/M/L Moderate	Estimated cost to implement • Unknown, may require different technical approaches at different facilities. Affordability depends on the actions necessary to implement the standards. Could be very expensive. Degree of certainty • Uncertain based on unknown cost	H/M/L Low	Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • FCRPS BiOP survival standards exist and would need modification if changes are suggested • FERC license BiOP survival standards exist and would need to be modified • SAR standards would need to be incorporated in modified BiOPs • 401 Water Quality Certs with fish passage performance standards would need to be amended • Application for non-listed Chinook stocks? Degree of alignment with current federal/state law • Depends if new survival standards are suggested or not, and how dramatically the deviate from current standards Political/social feasibility: • Depends if new survival standards are suggested or not • Low – lengthy legal process Technical feasibility: • Feasible to implement actions to

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						improve survival Degree to which it reinforces or leverages existing efforts: • High, particularly in FCRPS and at facilities with new downstream collectors and adaptive management in FERC licenses Degree of certainty: • Unknown

Additional information (WG Meetings 2 & 3)

- Recommendations about where and when to implement each action, including sequencing (if not covered above in table)
    - FERC Dams with fish passage survival standards in priority Chinook watersheds:
        - Northern Puget Sound
            - Baker Lake Dams (Baker River - Puget Sound Energy)
                - Floating Surface collectors
            - Skagit River Dams (Seattle City Light)
            - Jackson Dam (Sultan River- Snohomish PUD)
        - Southern Puget Sound
            - Cushman Dams (Skokomish River – Tacoma Power
                - Floating Surface Collectors
            - Nisqually Dams
        - Lower Columbia River
            - Lewis River Dams (Lewis River – PacifiCorp, Cowlitz Co PUD)
            - Cowlitz River Dams (Cowlitz River – Tacoma Power, Lewis Co PUD)
        - Upper Columbia River
            - Enloe Dam (Similkameen – OKPUD)
        - Middle Columbia river
            - Wanapum, Priest Rapids, Rock Island, Rocky Reach, Wells, Lake Chelan (Mid-C PUDs)
        - Washington Coast

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        - Wynoochee Dam (Wynoochee River – Tacoma Power)
        - Skookumchuck Dam (Skookumchuck River - TransAlta
    - Non-FERC existing and proposed large dams with potential fish passage standards
        - Northern Puget Sound
            - Middle Fork Nooksack Diversion Dam (Bellingham)
        - Southern Puget Sound
            - Cedar/Lake Washington
                - Ballard Locks
            - Green River
                - Howard Hanson Dam flood control(USACE) and downstream diversion
            - White River
                - Buckley Diversion Dam and Mud Mountain Dam flood control (USACE)
        - Lower Columbia River
            - Toutle River Sediment Retention Structure
        - Mid-Columbia
            - Roza and Chandler Irrigation Diversions (Yakima River – Roza ID (Support expediting negotiated operational changes through YBIP)
            - Cle Elum Dam (Bureau of Reclamation)
            - Tumwater Diversion Dam (Wenatchee watershed)
        - Mid-Columbia (but in Snake River Recovery Plan geography)
            - Mill Creek/Walla Walla dam (USACE)
        - Washington Coast
            - Upper Chehalis River flood control dam
    - FERC relicensing
        - 3 Skagit River Dams (Seattle City Light -2025) – high in naturally blocked watershed and no Chinook passage ramifications
        - S. Fork Tolt (Seattle City Light – 2028)
        - Rock Island (Chelan PUD – 2027)

- Whether each action will improve conditions for all pods or a subset
    - Passage improvements in watersheds may benefit pods that overlap with Chinook stocks in those watersheds

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Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
    - Achieving better passage survival performance likely requires enhances spill where applicable, or modifications in attraction and engineering at collection and passage facilities. These modifications can cost significant, unprojected resources. Therefore, affected entities may object to such changes mid-permit. Likely, most added costs would be passed through to a ratepayer.
- Comments on current and potential funding sources and estimated gaps
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management
- Does the action take climate change into account and if so how?
- Additional considerations unique to Working Group, if appropriate:_____

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Action C – Reduce predation near dams

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Increase survival at predation hot spots near dams • Ensure netting, sprinklers or other deterrents to predators • Implement diffused release sites for juveniles by-passing a dam • Deter bird predators near outfalls/ladders • Reduce migratory bird breeding islands • Increase predator removal programs • MMPA revision where needed • Decrease spawning success of non-native fish in reservoirs • Support efforts to keep northern pike from moving into anadromous waters Many dam operators are doing what they can already, very actively managing	H/M/L High	Magnitude of benefit to SRKW (quantify if possible): • High Time for response to occur: • Immediate Degree of certainty: • High Depends on what's already being done at each facility. Highly effective, but might already be underway. Most if not all FERC licensed dams have deterrent devices (wire, netting, sprinklers, etc.).	H/M/L Low	Estimated cost to implement • Unknown Degree of certainty • Uncertain based on unknown cost	H/M/L Low	Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • High as these are structural modifications or enhancements to existing infrastructure that shouldn't require legal process Degree of alignment with current federal/state law • High; Migratory Bird Act might be an issue Political/social feasibility: • High; Netting is easy from a social standpoint; items that alter gamefish rules will face opposition. Pretty easy if social acceptance of amending MMPA and MBTA and angling groups don't reject reclassifying non-native game fish Technical feasibility: • High Degree to which it reinforces or leverages existing efforts: • High Degree of certainty: • High

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predation to achieve survival standards. Very important to keep northern pike from moving into anadromous waters. Do more to deter this kind of predation. Check into how this relates to spill, since they're coming from the headwaters downstream.						

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
- Comments on current and potential funding sources and estimated gaps
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms

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- If and how each action could be evaluated, monitored and responsive to adaptive management
- Does the action take climate change into account and if so how?
- Additional considerations unique to Working Group, if appropriate:_____

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Action D – Reduce juvenile salmon entrainment and impingement at dams (see habitat actions for irrigation diversions)

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Where it helps provide safer passage, improve fish screens and eliminate entrainment in diversions at dams. Consolidate diversions to reduce risks to salmon. Could use a map or geographic specificity. May already be largely taken care of. Yakima screens will be replaced in the next few years – being worked on constantly. Chris has a list of OR passage priorities; not overlain with SRKW priority stocks, but will send it along. Mostly dams, some culverts, bridges. DFW received some funding to help with east-side	H/M/L: Low	Magnitude of benefit to SRKW (quantify if possible): • Unknown but likely low considering the incremental benefit is likely low Time for response to occur: • 1 – 3 years Degree of certainty: • High Encourage consolidation of diversions – effective In general, we're pretty effective at this already, hard to see when incremental benefit would be. Most if not all known public and larger private dams are in compliance and an inventory of smaller dams and the magnitude of impact is unknown so the effectiveness of increasing chinook for SRKW is probably low.	H/M/L: High	Estimated cost to implement • Unknown Degree of certainty • Uncertain based on unknown cost	H/M/L: High	Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • High as these are structural modifications or enhancements to existing infrastructure that shouldn't require legal process Degree of alignment with current federal/state law • High; In OR, these kinds of actions can trigger some of their passage laws, including a fairly mandatory investment on the owner's part to bring things up to current standard. Political/social feasibility: • High Technical feasibility: • High Degree to which it reinforces or leverages existing efforts: • High Degree of certainty:

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screening inventories, more on the habitat side. Not as much benefit on the larger dam side.						• High

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset
    - Depends upon where implemented

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
- Comments on current and potential funding sources and estimated gaps
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management
- Does the action take climate change into account and if so how?
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Action E – Successfully reintroduce salmon into blocked areas above dams

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Prioritize and fund re-establishment of runs into currently blocked areas above dams in those areas that can successfully produce more salmon. • Continue exploring, through processes already underway, reintroducing salmon above the Chief Joseph Dam. • Continue to support reintroduction of Skokomish spring Chinook. • Identify whether there are opportunities to support or accelerate reintroduction efforts in the Lewis and Cowlitz systems. Efforts with plans already underway (conservation focused): • Skokomish spring reintroduction • Lewis and Cowlitz • Oregon Deschutes • Cle Elum (under construction) • If people know of others, others please send to us Habitat suitability really needs to be assessed before reintroductions. Return on investment may be low	H/M/L	Magnitude of benefit to SRKW (quantify if possible): • High Time for response to occur: • Long term (10+ years) Degree of certainty: • High Really depends on specific site and whether or not passive passage is possible or if active transport will be needed. Explore areas where restoration would add additional value to passage into currently blocked areas Some reservoirs provide cool water in the summer and flow enhancement when needed and both can buffer against climate change.	H/M/L:	Estimated cost to implement • Unknown at this time but assessments have been or will be completed and that information will be provided Degree of certainty: • Low certainty unless additional revenue becomes available	H/M/L	Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Highly feasible but may/will require policies and agreements Degree of alignment with current federal and state law (versus requiring changes to laws): • High but unknown Political/social feasibility: • Varies but reintroducing fish above blocked areas need to consider ESA implications Technical feasibility: • Site specific and variable Degree to which it reinforces or leverages existing efforts: • High Degree of certainty: • Varies from high to low depending upon site

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assuming natural passage is not viable and whether or not upstream habitat is suitable Above Chief Joe – if you just put excess adults above it, there's good spawning habitat in the mainstem. There's some modeling of this, and the cost-benefit looks good without additional downstream passage. Exploring potential passage options through NW Power and Conservation Council process – first phase, now wrapping up is feasibility and habitat analysis. Likely to move to second phase involving experiment with salmon releases and further detail work on passage technologies. Then decision about what level of permanent implementation in Phase 3. Teed up in the Columbia River Treaty too. Colvilles are also considering near-term releases of hatchery fish above Chief Joseph. Lower Columbia – studies of reintroductions, particularly of spring Chinook, already done, and these are crucial parts of the regional recovery plan. Lewis and Cowlitz are high priority for SRKW.						

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Maybe focus habitat restoration downstream of this to capture full benefit? (Complementary initiative) Historically, habitat for spring Chinook was mostly above those reservoirs. There's a lot of habitat work planned in both of those basins, and lots of productive habitat already there. Need to dial in juvenile capture-ability in those systems. That's the key bottleneck. Substantial good quality habitat in the Willamette – working with the Corps on this. Make sure we don't forget OR when doing the geographic prioritization. Non-hydro dams: • Juvenile passage at Howard Hanson Dam (Green River) • Some spring Chinook benefits to Cle Elum passage • Tieton Dam/Rimrock Reservoir passage in the Yakima Basin • See the notes from Action A, see where they overlap with priority watersheds Are there analyses of how the dams that aren't coming out help provide cold-water releases? (Yes, often included in FERC re-licensing efforts.)						

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Make sure climate resiliency is built into this recommendation to the Task Force. Think about downstream habitat improvements where necessary.						

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
- Comments on current and potential funding sources and estimated gaps
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
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Action F – Remove structures that impound rivers of most benefit to chinook, where feasible

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Remove dams in locations that most benefit Chinook passage for SRKW prey Compile a list of dams and structures that impound rivers that have been successfully removed , i.e., benefit salmon with little or no impacts to stakeholders Prioritize most effective dams to remove for SRKW recovery. Identify and prioritize those dams that are feasible for removal as near term/immediate actions Increase mitigation for dams that won't be removed Improve flow management for downstream habitat including impacts to estuaries by improving transport of sediment, bedload, debris and nutrients DFW has an app on its website where you can search and filter by different kinds of dams. Can sort by watershed. This information is	H/M/L High	Magnitude of benefit to SRKW (quantify if possible): • High Time for response to occur: • Response is almost immediate following implementation Degree of certainty: • Highly effective Include chum and coho stocks in south Puget sound	H/M/L: Low (but it's very site-specific)	Estimated cost to implement (in dollars): • High but unknown. Assessments are likely available so information is probably available for some dams Degree of certainty: • Low unless new revenue becomes available	H/M/L Site-specific. Lots of controversy usually.	Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • NEPA process underway to examine lower Snake River dam removal among other options • Regulatory process for other dams varies by dam (FERC or other processes) Degree of alignment with current federal and state law (versus requiring changes to laws): • Varies by dam Political/social feasibility: • Varies by dam and we must be very clear that this action considers (1) every dam, and (2) benefit to chinook • Work with regional organizations and lead entities to address political/social factors Technical feasibility: High Degree to which it reinforces or leverages existing efforts: • Certain dam removals could put in jeopardy funds for habitat work and mitigation Degree of certainty:

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already there – but then need to apply the other socio-economic criteria. John Floberg at NOAA has been working on creating a list of dams that are "relatively" feasible to remove. Run this by the Lead Entities to check the list. Middle Fork Nooksack Diversion Dam, Chambers Creek, Enloe Dam, which blocks listed upper Columbia River spring chinook, recently videotaped jumping below the dam. Pilchuck Dam on Snohomish River at Granite Falls. https://www.landauinc.com/our-work/permitting-and-compliance/pilchuck-dam-removal-feasibility-study/ Sullivan Lake facility also was removed. Associated with the Box Canyon Dam. Steve also will ask the regions and lead entities to verify the list of dams that have been removed. Skookumchuck Dam? Can we talk with TransAlta about this? Might be an opportunity there. Consider climate change. Balance						• Highly variable

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the carbon emissions benefits of hydro with its effects on species. Could make a link to the climate fee/tax initiative. Funding would go to clean water and habitat projects. TF could make a recommendation on that. **Consider SRKW and Chinook in proposals for new dams** Proposals for Dams in spring Chinook (or fall Chinook) habitat (like Chehalis) should evaluate the effect of new dams on orcas. (This connects with Habitat too) Consider moratorium on new dams						

NOTES ON INPUT, COMMENTS AND QUESTIONS FROM TASK FORCE ON THIS ACTION ON 6/14/18:

- What dam removal projects are already under consideration?
- Is there a list of dams that could be removed even if they are still useful?
- Paul Allen Foundation/American Rivers has done an analysis; can the WG look at that list and give the TF feedback?
    - Report lists some potential dams that could be removed but was not comprehensive or consider all factors- not publicly available.
- Consider where dams are in the legal process; some already have an EIS.
- What are the unintended consequences of dam removal? Human safety, spills, etc.
- Consider potential loss of hatchery production due to less mitigation burden to produce fish.
- Consider potential loss of F&W funding due to less mitigation burden/requirements and decreased revenue generated.
- Consider unintended consequences (e.g. if ships cannot pass then what increase would arise in trains and trucks?)

Additional information (WG Meetings 2 & 3)

- Recommendations about where and when to implement each action, including sequencing (if not covered above in table)

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  - Steps to take: Inventory dams and impoundments that block fish passage or otherwise impair salmon survival, overlay with priority areas, and prioritize impoundments and dams to be considered for modification or removal
  - Assess spill levels to maximize survival of juvenile chinook and raise total dissolved gas cap if needed or where appropriate to maximize survival of juvenile chinook

- Whether each action will improve conditions for all pods or a subset

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
- Comments on current and potential funding sources and estimated gaps
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management
- Does the action take climate change into account and if so how?
- Additional considerations unique to Working Group, if appropriate:_____

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Considerations for Evaluating Potential Actions
SRKW Prey Working Group to Task Force

Predation

Action A

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Remove or alter artificial haul outs or breeding locations so they are not as attractive to predators (pinnipeds, piscivorous birds) A pilot approach may be appropriate to better determine efficacy. Would need to develop implementation plan, adaptive management approach. WDFW is creating maps the overlay SRKW priority prey stocks with map of haul out sites and breeding bird colonies that would affect adult and juvenile migration corridors to determine specific alteration locations. Potential Opportunities (birds): Terns: Rat Island, rooftops in Bellingham bay, etc. Pigeon Guillemots: Hood Canal bridge	**H/M/L** Pinnipeds: L Birds: L-Unknown – for two reasons: 1) not clear that birds are impacting salmon, and 2) not clear that action would be effective if other nesting alternatives exist.	**Brief explanation of rating:** **Magnitude of benefit to SRKW (quantify if possible):** • Pinnipeds: Uncertain due to new data becoming available on pinniped numbers and diet (which will give a more current and area-specific estimate of predation levels- Fall 2018 for WDFW and Canada DFO work to be completed). If alterations to haulouts are done the animals may shift distribution and numbers to other locations (anecdotal information suggests this is the case). A pilot approach may be appropriate to better	**H/M/L:** Pinnipeds: L Birds:	**Brief explanation of rating:** **Estimated cost to implement (in dollars):** • Pinniped: Variable cost, depending on approach. Up to $250k to retrofit dock in Astoria. Need to add in pre and post monitoring costs • Birds: Have call into FWS for estimate. • Both: High cost to be a substantial action. There would be an additive effect of each site modification. Degree of certainty: • Uncertain until more examples.	**H/M/L** Pinnipeds: Low ease of implementation due to need to do it in multiple places Birds: Low due to smaller, dispersed colonies especially in Puget Sound and uncertainty if they would just move to somewhere nearby	**Brief explanation of rating:** **Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.):** • Pinnipeds: Permits/authorization is required from National Oceanic and Atmospheric Administration authorization due to Marine Mammal Protection Act; other permission or permitting may be required depending on ownership (e.g. Wildlife refuges) • Birds: Permits/authorization is required from US Fish and Wildlife Service authorization due to Migratory Bird Treaty Act; other permission or permitting may be required depending on ownership (e.g. Wildlife refuges). This is feasible particularly if the action simply moves the population versus reducing the population, the USFWS would likely require monitoring to ensure the population is merely redistributing itself and is not being impacted by the action. Habitat modification has occurred at sites in the Columbia River estuary, so we know that part of the equation is possible.

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		determine efficacy. • Birds: Low; concerns that the animals will redistribute to other areas that may or may not be desirable. Though birds have been successfully dissuaded before, it has been difficult to quantify impacts of these actions to previous dissuasion events. Columbia River different from Puget Sound- don't focus on birds in Puget Sound. Not clear that birds are impacting salmonid populations in Puget Sound. Also due to huge foraging distances this action is unlikely to be effective. Time for response to occur: • Intermediate (3-10 years) Degree of certainty: • Low/Medium: Uncertainty about where pinnipeds and birds may shift to after being				**Degree of alignment with current federal and state law (versus requiring changes to laws):** • Pinnipeds: No changes needed to remove but permitting required. For controlling the creation of new haul outs what about private property? May be able to limit this through permitting requirements under WAC from DNR. • Birds: No changes needed to remove but permitting required. Limiting creation of artificial habitat might be possible. However, in some cases there might be economic or other reasons that indirectly lead to creation of habitat or substrate conditions that are conducive to nesting birds (e.g., building a warehouse with a flat roof may be the most economical approach, but may also result in a nest site for Caspian Terns). Modifying these practices may require economic incentives or other non-regulatory measures. Regulatory measures could cause additional conflict. **Political/social feasibility:** • Easier than lethal removal • Pinnipeds: social issues of encouraging lands/property owners to accommodate modifications to prevent haul outs (e.g., some have incentive to increase haul out availability for tourism. Conservation status on state lands may restrict with opportunity to modify haulouts (e.g., DNR NRCA). • Birds – social conflicts with conservation

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		excluded from some areas. Uncertain about bird impact to salmonids in Puget Sound.				groups for certain actions **Technical feasibility:** • Pinnipeds: May not be able to get them off the haul outs even if we try? • Birds: Yes, has been successful in past for birds. Doing this in the Columbia where this has been done before may be different than doing this in Puget Sound. **Degree to which it reinforces or leverages existing efforts:** • Pinnipeds: Does not directly but follows marine survival study results we have at this point • Birds: ACE EIS- cormorants; inland avian predation plan. Existing (ongoing) action involves a different geography and largely fresh water environment of Columbia River. Not clear that a Puget Sound effort reinforces or leverages other efforts. **Degree of certainty:** • Certain that implementation is likely possible in many places but complicated or delayed due to permitting required under current laws.

INPUT, COMMENTS AND QUESTIONS FROM TASK FORCE ON THIS ACTION FROM 6/14/18:

- Where are there artificial haul outs?
  - These haul outs are log booms at mills, at boat docks, navy facilities, dredge spoils, sand bars, etc. Almost all haul outs in Puget Sound from Olympia to Bellingham are artificial. In Strait of Juan De Fuca, San Juan Islands and Coast mostly natural haul outs are used.
- Are there any easy wins?

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  - If we can use social attraction (shown to be effective) and nest site enhancement in Grays Harbor (there are some promising candidate sites – Sand Island NAP, Whitcomb Island NAP, two islands off the mouth of Johns River) we could potentially attract Caspian Terns away from Puget Sound. Easy win if Caspian Terns move away from Puget Sound. Potential complication if Caspian Tern population increases in Grays Harbor and then expands back into Puget Sound.
  - Pigeon guillemot modification of Hood Canal Bridge – can eat outmigrating chinook and they have developed cavities on both sides of the bridge. Several hundred pairs.
- Are there differences in how structures present in the Columbia River versus Puget Sound (e.g., Hood Canal Bridge versus Bonneville Dam)?
  - Yes, for birds there are differences. Along the Columbia River the birds are using dredge spoil islands and other islands. In Puget Sound, Caspian Terns are nesting on a natural island, for one year on a floating barge, on a waterfront dock, perhaps on a flat roof; cormorants are nesting on a rock jetty and now there is a 400-nest colony in coniferous trees in south Puget Sound.
- Ensure that we aren't harming transients (by removing their food resource) while we try to help SRKW.
  - Could this help transients eat more pinnipeds? Perhaps but they do not eat as many pinnipeds as many think. Would need a lot more transients to change pinniped population levels. (source: Benjamin Nelson)
- There are some companies that specialize in deterrents... consider these for figuring out potential affordability.
  - Attempting to contact USFWS and USACE because they have been involved in doing this for birds along the Columbia River.
  - Attached list of companies that specialize in deterrents.
- Consider any impacts that removal might have on forage fish artificial habitat
  - Our greatest understanding of the Puget Sound marine food web comes from a period when the system and the various component pieces had been substantially altered from the pre-European or early-European period. Consequently, management actions could easily result in species responses in the ecological system that we do not expect or that we can't fully anticipate. A trophic cascade may have occurred 100 years ago, and local actions may transition things back somewhat to the period prior to that event. Do we know what that condition looked like and all the bits and pieces that will occur in the future as we strive for that desired state? "Recovery" of Puget Sound may not produce a linear "signature" such that stages of progression could be situations where not only are changes unexpected, but actually unstable and/or undesirable. This is potentially true for any of the actions.
  - Atlantis food web model being developed for Puget Sound by NOAA (within the year) that will give decision makes better tools to understand the ecosystem effect of specific management actions.

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset
  Depends on location of where action is done-see above and then determine this

Additional information (WG Meetings 4 & 5)

- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed

- Comments on current and potential funding sources and estimated gaps

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- Who has the authority to implement each action
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Action B

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Lethal removal to benefit specific runs and stocks (pinnipeds, birds, and/or other predatory fish) WDFW producing maps that overlay SRKW priorities systems pinniped haul out sites and piscivorous bird breeding colonies to determine where to priority to alter or remove. Fish: Columbia basin distribution of bass, walleye, and Pikeminnow is throughout the system, except not much walleye below Bonneville. Northern Pike are not found below Grand Coulee Dam and are not currently predators on salmonids in the Columbia, but their potential as future predators is so large. Any program should include containment costs. Could map the dams/reservoirs, Chinook pinchpoints that are most problematic and the tributaries that are most impacted. Overlay with SRKS priority systems.	**H/M/L** Pinnipeds: L- Uncertain Birds:.L- Uncertain Fish: M - Could have a large effect at certain locations, depending on fish assemblage	**Brief explanation of rating:** **Magnitude of benefit to SRKW (quantify if possible):** • Pinnipeds: Uncertain due to new data becoming available on pinniped numbers and diet (which will give a more current and area-specific estimates of predation levels- Fall 2018 for WDFW and Canada DFO completion). Other data indicates that pinniped predation is generalized and not localized, meaning that removal from a specific foraging or haul out area may not greatly affect the number of pinnipeds using them. There is also uncertainty about how lethal removal would impact the food web and therefore if	**H/M/L:** Pinnipeds: M Birds: M Fish: M	**Brief explanation of rating:** **Estimated cost to implement (in dollars):** • Pinnipeds: Canada for estimates? (Lisa Jones follow up) 1M dollars a year? Lethal removal of sea lions in the Columbia costs $300k/yr. Puget Sound is different and likely more costly. $685k estimate (plus enforcement costs) for pilot study to determine effectiveness • Birds: contact USFWS and USACE for estimates. • Fish: Total annual cost of the Pikeminnow program that is funded by BPA is $3.5 million. Each of the three PUDs also runs a Pikeminnow program. • Northern Pike suppression program estimated at $1-$2M minimal cost to be effective in short term. Northern Pike are not	**H/M/L** Pinnipeds: L (at Bonneville, could do more w/out permit, if it were deemed effective and funding were avail.) Birds: M Fish: M	**Brief explanation of rating:** **Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.):** • Pinnipeds: Permits/authorization is required from National Oceanic and Atmospheric Administration authorization due to Marine Mammal Protection Act and already exists for some actions; other permission or permitting may be required depending on ownership (e.g. Wildlife refuges). Amount of allowed lethal take under MMPA is limited to a certain level (Potential Biological Removal, PBR) of each stock, which may or may not be enough to have the desired impact. Depending on this factor, a change in MMPA may be required to take additional animals over and above PBR. • Birds: Permits/authorization is required from US Fish and Wildlife Service authorization due to Migratory Bird Treaty Act; other permission or permitting may be required depending on ownership (e.g. Wildlife refuges). In addition, it seems quite likely the USFWS would approve this option only after nonlethal options had failed or were found to be impractical. Consequently, feasibility of the proposed project will be based in part on the other elements of a strategy.

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		"freed up fish" would really go to SRKW or another animal/factor in system. • Birds: If birds are responsible for a very small level of predation on salmonids there would be uncertainty about effectiveness. • Fish: Piscivorous predators of primary concern for salmon / steelhead are invasive non-natives (Northern Pike), non-native warm water species (Walleye, bass), and native fish (northern pikeminnow). A high priority and potential big impact is Northern Pike if they move into the anadromous zone in the Columbia River. Suppression of Northern Pike is high priority and high magnitude action. • For Pinnipeds and Fish: A pilot to determine efficacy in one area may help to detect success but may be difficult due to several confounding		currently in the anadromous zone of Columbia River so this is a preventative program. There is currently no impact. Degree of certainty: • Pinnipeds: Removal operations are likely costly • Birds: Fairly certain that this action would be costly, because a likely condition of the permit would be to conduct monitoring to assess population response (of the birds), and to assess success of population management on salmonids • Fish: Northern Pike are not found below Grand Coulee Dam. Funding is for containing them in Roosevelt, so they do not become a predation problem downstream. They are not currently predators on salmonids in the Columbia, but their potential as future predators is so large that any program should include containment costs.		• Fish: Few regulatory constraints for removal or suppression programs. Request that the F&W Commission reclassify non-native predatory fish? **Degree of alignment with current federal and state law (versus requiring changes to laws):** • Pinnipeds: Depends on how many you want to take within each stock... could take PBR levels within each stock. If need to take more animals then a need change in MMPA. • Birds: USFWS can authorize this. However, their general approach to lethal action is as a last resort after other actions have been attempted and found to be ineffective. Leading with lethal management instead of nonlethal will almost certainly be ineffective due to incompatibility with USFWS (and stated Pacific Flyway Council) practices and the threat of legal challenges. • Fish: State game fish laws may need to be modified for certain species **Political/social feasibility:** • Pinnipeds and Birds: o Social tolerance for lethal removal is a factor o Lawsuits would be likely for pinnipeds and birds, possibly for game fish as well. o Some WG members believe that once information about potential benefit to SRKW and Chinook by doing this action is out to public and decision makers that many of these implementation difficulties

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		factors. **Time for response to occur:** • Intermediate (3-10 years) **Degree of certainty:** • Pinnipeds: Low/Medium and certainty of current problem statement and best ways and places to address pinniped predation should be strengthened by WDFW analysis and Canada new study available in late summer/fall 2018. • Birds: Low • Fish: Low/Medium • Pinnipeds, Birds, Fish: Detecting success in salmon recovery would be contingent upon other actions for ecosystem recovery				would be resolved. Other WG members believed that these complications would still exist and affect implementation greatly. Knowing that bird population management was being done to benefit salmonids in the Columbia River did not prevent legal challenges over the last 15-20 years. ○ Pacific flyway council policy on piscivorous bird management exists – nonlethal first, development management plans, coordinate stakeholders, use science, monitoring, etc, and exhaust all other possibilities before any lethal action. • Pinnipeds: ○ Salmon advocates, anglers, etc. increasing concern over pinniped population increases since MMPA implementation. Concerns about cost of not doing it? ○ Due to uncertainty about efficacy of a lethal control program and food web consequences, questions were brought up that public and WG members may be in two camps: 1) Need more information to be sure before taking action or 2) Need to take the action in order to provide the data needed to understand efficacy. • Fish: ○ Northern Pikeminnow program successful with public support ○ Awareness and public concern over Northern Pike growing, funding is major

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						constraint currently ○ Walleye and bass fishers somewhat out of alignment with predator reduction/removal programs and varies across geographic location. ○ Bass and walleye anglers are aware that predation on salmonids is a localized issue with those two species, in comparison with Pikeminnow predation which is widespread, and pike predation, which is expected to be widespread. Bass and walleye anglers are much more supportive of local control programs at identified predation hotspots, they tend to be more opposed to general programs as predation problems are not broadscale. In other words, there would be more angler support for localized actions than for population level maintenance actions for these two species. **Technical feasibility:** • An ongoing comprehensive predator management program or programs would be needed to maintain any potential benefits to Chinook and SRKW. Potential that costs of a "maintenance level" program may be less than costs of program to make immediate and near-term progress. **Degree to which it reinforces or leverages existing efforts**: • Aligns with Puget Sound salmon recovery (not

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						explicitly in plans though) since aligns with current knowledge from marine survival study. • Predation actions are included in Columbia River FCRPS BiOp. • Birds: leading with lethal management instead of nonlethal is misaligned with USFWS (and stated Pacific Flyway Council) practices. **Degree of certainty:** • Low; See varying opinions under social/political. • Low certainty of implementation if lethal is the start point; much increased certainly of using lethal actions as a component of a strategy if nonlethal actions are attempted and well demonstrated to have failed or found to be impractical.

NOTES ON INPUT, COMMENTS AND QUESTIONS FROM TASK FORCE ON THIS ACTION ON 6/14/18:

- How big is the problem with predators, compared to other prey-limiting factors (e.g., losses to dams and to human harvest)?
  - Important to recognize that predation actions aren't and "or" relative to other recovery actions, they are an "and" – i.e., not in lieu of other actions but as a suite of actions.
  - New data becoming available on pinniped numbers and diet (which will give a more current and area-specific estimate of predation levels) by Fall 2018 from WDFW and partners and Canada DFO.
  - Teasing apart to relevance of the various factors is a challenge that needs to be addressed in some way.

Additional information (WG Meetings 2 & 3)

- Recommendations about where and when to implement each action, including sequencing (if not covered above in table)

  Pinnipeds: Geographic overlay with SRKW priorities - being produced.

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Birds: Geographic overlay needed with SRKW priorities being produced. Some bird species can move substantial distances from breeding sites to foraging areas (Caspian Terns: 50 miles; American White Pelicans: 150-200 miles), so these overlays would be specific to the different predator species.

Fish: Geographic overlay needed with SRKW priorities

For Pinnipeds and Fish: Could a pilot determine efficacy in one area or would confounding factors limit ability to detect success?

- Whether each action will improve conditions for all pods or a subset
    - Depends on location of where action is done

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
    - An Environmental Ethicist was engaged to explain the program up-front to stakeholders regarding proposed implementation of Barred Owl removal experiment to benefit Northern Spotted Owl. An ethicist can convey the tradeoffs between the ethical dilemma of the action(s) on one side compared to the ethical dilemma of no action relative to protection of T&E salmon populations on the other side.
- Comments on current and potential funding sources and estimated gaps
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management.

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- Any of the nonlethal and lethal actions could be evaluated using adaptive management. The focus of AM could be the species targeted for management (e.g., was the strategy effective in reducing the size of the breeding site?) or the species that would benefit (e.g., was the survival rate to spawning enhanced by reducing predator populations by 20%?).

- Additional considerations unique to Working Group, if appropriate:_____

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Action C

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Lethal removal in order to establish new baseline population levels (pinnipeds, birds, and/or other predatory fish) Fish Action 1 - Active removal similar to Northern Pike Minnow program, which is likely to be most effective. Potential to use bounties. Fish Action 2: Potential for managing water within reservoirs to modify spawning habitat to reduce productivity of warm water fish. – concept holds promise, study proposed.	**H/M/L** Pinnipeds: L/U Birds:L/U Fish: L	**Brief explanation of rating:** **Magnitude of benefit to SRKW (quantify if possible):** • Pinnipeds: Uncertain due to new data becoming available on pinniped numbers and diet (which will give a more current and area-specific estimates of predation levels- Fall 2018 for WDFW and Canada DFO completion). Recent study by Bowen and Lidgard 2012 – "Marine mammal culling programs: review of effects on predator and prey populations" (DFO) suggests that 50% decrease in abundance of predators and continued action to maintain this level needed to detect a change in predation levels. Check this study to ground truth Other data indicates that	**H/M/L:** Pinnipeds: M/H - Uncertain Birds: M/H - Uncertain Fish: M/H Uncertain	**Brief explanation of rating:** **Estimated cost to implement (in dollars):** May be more expensive than Action B due to more widespread work. • Pinnipeds: o Canada for estimates? (Lisa Jones follow up) 1M dollars a year? o Follow up- review historic information to better understand the cost and effect of widespread pinniped control programs through bounty. May not be so expensive if we engage the citizenry. o Costs could be reduced if individuals were allowed to take animals (e.g. as was done historically with bounties), but this would make enforcement work around this more important and costs	**H/M/L** Pinnipeds: L Birds: L Fish: M	**Brief explanation of rating:** **Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.):** • Pinnipeds- L: Not currently possible under Marine Mammal Protection Act. MMPA only allows lethal removal up to a certain level (Potential Biological Removal) of each stock, which will not be enough to reach the overall reduced population levels this action calls for. Also, lethal take by any individual person (not permitted state, federal, tribal agencies) is not currently allowed, so this change would need to be made if that method is desired. Tribes have some opportunity now, but is not publicly supported. • Birds - L: Permits/authorization is required from US Fish and Wildlife Service authorization due to Migratory Bird Treaty Act; other permission or permitting may be required depending on ownership (e.g. Wildlife refuges). In addition, it seems quite likely the USFWS would approve this option only after nonlethal options had failed or were found to be impractical. Consequently, feasibility of the proposed project will be based in part on the other elements of a strategy. • Fish - M: Columbia River treaty and flows would be affected if doing modifications of

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		pinniped predation is generalized and not localized, meaning that removal from a specific foraging or haul out area may not greatly affect the number of pinnipeds using them. There is also uncertainty about how lethal removal would impact the food web and therefore if "freed up fish" would really go to SRKW or another animal/factor in system. • Birds: If birds are responsible for a very small level of predation on salmonids there would be uncertainty about effectiveness. • Fish: Even when lakes have been rotenoned, seems like not long before the fish return. Predator removal has been shown to trigger the compensatory response and make a bigger problem. Need to follow up with more information on potential effect of removal. Analyze how much predation pressure		would increase in that area. ○ Funding also needed to monitor effectiveness. • Birds: planning, EIS, actual lethal action, comprehensive monitoring (10yr?) back of envelope estimate - $10mil • Fish: Total annual cost of the Pikeminnow program that is funded by BPA is $3.5 million. Each of the three PUDs also runs a Pikeminnow program. • by BPA • Northern Pike suppression program estimated at $1-$2M minimal cost to be effective in short term. Northern Pike are not currently in the anadromous zone of Columbia River so this is a preventative program. There is currently no impact. **Degree of certainty:** • Pinnipeds: Removal operations are likely costly • Birds: costly because permit condition likely to conduct monitoring to		spawning at reservoirs. FCRPS. ESA Permitting issues regarding netting and removal – bycatch on listed fish. • Example: Changing the status of non-native warm water fish to take it off the game fish list. But there would be pushback from anglers. But status change may not affect fishery management. Develop a rule mechanism to allow folks to legally dispose of warm water fish in Col mainstem. **Degree of alignment with current federal and state law (versus requiring changes to laws):** • Pinnipeds: Depends on how many you want to take within each stock... could take PBR levels within each stock. If need to take more or allow individual take then need change in MMPA • Birds: USFWS can authorize this. However, their general approach to lethal action is as a last resort after other actions have been attempted and found to be ineffective. Leading with lethal management instead of nonlethal will almost certainly be ineffective due to incompatibility with USFWS (and stated Pacific Flyway Council) practices and the threat of legal challenges. • Fish: State of WA has no legal limitations on warm water fish, so could do removal. State of Oregon can. Issue of interaction of Fed listing stocks exists. **Political/social feasibility: L** • Pinnipeds and Birds:

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		would result from certain levels of predator removal. The magnitude of action for fish would be need to be much larger than scoped for pinniped/birds. Lower baseline for fish. • For Pinnipeds and Fish: A pilot to determine efficacy in one area may help to detect success but may be difficult due to several confounding factors. **Time for response to occur:** • Intermediate (3-10 years) **Degree of certainty:** • Pinnipeds: Low/Medium and certainty of current problem statement and best ways and places to address pinniped predation should be strengthened by WDFW analysis and Canada new study available in late summer/fall 2018. • Birds: If birds are responsible for a very		assess population response (of the birds), and to assess success of population management on salmonids • Fish: if fully funded can be effective.		○ Social tolerance for lethal removal is a factor making this difficult. ○ Lawsuits would be likely for pinnipeds and birds. Risk of litigation seems likely to be higher because some might argue the management is less targeted and has a bit of randomness to it. ○ If take was allowed by any individual, this action would have higher social costs • Pinnipeds: ○ Salmon advocates, anglers, etc. increasing concern over pinniped population increases since MMPA implementation. Concerns about cost of not doing it. ○ Due to uncertainty about efficacy of a lethal control program and food web consequences questions were brought up that public and WG may be in two camps: 1) Need more information to be sure before taking action or 2) Need to take the action in order to provide the data needed to understand efficacy? • Fish: Power generation may be an issue with reservoir modification. May also impact recreation depending on level of modification. **Technical feasibility:** • An ongoing comprehensive predator management program or programs would be needed to maintain any potential benefits to Chinook and SRKW. However, once levels are initially reduced it may be less effort to maintain them. Potential that costs of a "maintenance level" program may be less than

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		small level of predation on salmonids there would be uncertainty about effectiveness. • Fish: Primary concern for salmon/steelhead are invasive non-natives (Northern Pike), non-native warm water species (Walleye, bass), and native fish (northern pikeminnow). A high priority and potential big impact is Northern Pike if they move into the anadromous zone in the Columbia River. Suppression of Northern Pike is high priority and high magnitude action. Uncertain how many would need to be removed to be effective. • Pinnipeds, Birds, Fish: Detecting success in salmon recovery would be contingent upon other actions for ecosystem recovery				costs of program to make immediate and near-term progress. • Fish: unknown/promising re reservoir modification, worth learning more about. **Degree to which it reinforces or leverages existing efforts:** • Aligns with Puget Sound salmon recovery (not explicitly in plans though) since aligns with current knowledge from marine survival study. • Predation actions are included in Columbia River FCRPS BiOp. • Birds: leading with lethal management instead of nonlethal is misaligned with USFWS (and stated Pacific Flyway Council) practices. **Degree of certainty:** • Medium; Working Group is more certain that implementation would be difficult (more than for targeted lethal removal) due to social/political reasons and changes needed in MMPA

Additional information (WG Meetings 2 & 3)

- Recommendations about where and when to implement each action, including sequencing (if not covered above in table)
  Statewide

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- Whether each action will improve conditions for all pods or a subset
    - All pods because action is statewide

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
- Comments on current and potential funding sources and estimated gaps
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management
- Additional considerations unique to Working Group, if appropriate:_____

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Action D

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Employ new non-lethal hazing or exclusion techniques	**H/M/L**	**Brief explanation of rating:** **Magnitude of benefit to SRKW (quantify if possible):** • Pinnipeds: Low, Unknown? • Birds: as in other responses to proposed actions this would be low, because the Puget Sound pressure on salmonids from birds seems likely to be so low. **Time for response to occur:** • Intermediate **Degree of certainty:** • Need information on previous discussions, studies and trials	**H/M/L:**	**Brief explanation of rating:** **Estimated cost to implement (in dollars):** • Pinnipeds: • Birds: Cost will be specific to methods used. Some methods require ongoing maintenance (disruptive flagging), field efforts to dissuade (disturbing birds from the nest area; egg oiling), or field efforts to attract (social attraction). Other approaches may require one-time actions (vegetation management). These have been used along the Columbia R. or in an attempt to recruit away from the Columbia R. Degree of certainty: • Pinnipeds: • Birds: strategies will be dependent on local conditions; flagging may be required on rooftop nests, vegetation	**H/M/L**	**Brief explanation of rating:** **Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.):** • Pinnipeds: • Birds: being used currently along the Columbia River, so seems like practical approach **Degree of alignment with current federal and state law (versus requiring changes to laws):** • Pinnipeds: • Birds: being used currently along the Columbia River, so seems like practical approach **Political/social feasibility:** • Pinnipeds: • Birds: Not entirely clear. If approach is local and birds have other places to nest that are secure and free of conflict it seems like there would be better prospects for political/social acceptance. **Technical feasibility:** • Pinnipeds: • Birds: many methods field tested and being used along the Columbia River. **Degree to which it reinforces or leverages existing efforts:**

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				management might be best on a dredge spoil island, etc.		• Pinnipeds: • Birds: Not sure, because involves different regions/environments. **Degree of certainty:** • Pinnipeds: • Birds: Fairly high

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
- Comments on current and potential funding sources and estimated gaps
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management
- Additional considerations unique to Working Group, if appropriate:_____

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Considerations for Evaluating Potential Actions
SRKW Prey Working Group to Task Force

Habitat – In July 2018, all WA Salmon Recovery Regions submitted habitat priorities, based on current recovery plans. Reviewers should refer to these, located in the Box folder, for detail. Lower Columbia, Puget Sound, Hood Canal and Upper Columbia had participation in the call and are represented below. The Snake, WA Coast, and Yakima will be added during the meeting on July 25th.

Action A

Comment [AH1]: Potentially want to split action into implementation and enforcement. They have different ratings. To be decided July 25 – suggest splitting

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Increase the implementation & enforcement of existing habitat protection regulations Lower Columbia – Highest priority for all subwatersheds is protecting the high quality habitat that already exists. Crosses local-state-fed agencies. CAOs, long range planning, section 401 (Ecy/EPA), ESA section 404, etc. PS – consistent with Lower Columbia. Bold actions developed by Tribes are inclusive of many of these. More to come.	H/M/L H	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • High (extremely difficult to quantify) Time for response to occur: • Immediate (0-3 years) Degree of certainty: • This may not be additive but is crucial in future losses. • Future permits that are issued could correct past implementation	H/M/L: M (staff) H (no need to change laws)	Brief explanation of rating: Estimated cost to implement (in dollars): • Understaffing issue across most regulatory agencies - More enforcement, permitting, compliance staff $$ • Applying the actual regs properly in the Hydraulic Code (as an example) doesn't cost anything • Cost to fully fund staff needed for compliance and enforcement could be scalable and	H/M/L L (if you are talking about across agencies, hard to affect change) H (simply implementing laws if they are written) L-M (enforcement)	Brief explanation of rating: (not good agreement on rating currently) Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Administrative complexity – applying the laws as they are written may not always be easy • Consistency among agencies is not known • Enforcement has some feasibility issues – if criminal allegations are made, they often are not prioritized by the prosecutor's offices. • Risk of being sued by wealthy waterfront landowners Degree of alignment with current federal and

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HC – SMA, CAO are complaint driven, emergency repairs are permitted without assessment, no compliance review, enforcement staff for state is not sufficient, FP rules are not implemented correctly As scalable to high priority watersheds: • For marine HPAs, encourage more consistent application of existing hydraulic code and guidelines, so that close to 100% of issued permits comply with statute and guidelines. • Improve HPA compliance and effectiveness by enhancing WDFW regional biologist capacity in priority watersheds • Support enhanced civil enforcement authority in the HPA program. Current civil authority is limited and criminal enforcement authorities are not resulting in resolution or fish and habitat benefit. Enhanced civil authority would better match what local governments, Ecology and DNR currently utilize. • DFW has used grant funds to pilot increased civil compliance under current law, and have seen		problems		prioritized Degree of certainty: • Depends on what work is being estimated. Application of the laws correctly doesn't cost anything. Checking and following up does. • Consistency among agencies is not certain		state law (versus requiring changes to laws): • Aligned Political/social feasibility: • Politically hard decisions • Politicians get blow back for hard decisions • May be cultural issues within agencies that need to be addressed that deal with permitting and enforcement Technical feasibility: • Need monitoring for compliance and effectiveness Degree to which it reinforces or leverages existing efforts: • Degree of certainty: • Depends on scope of changes. Limited changes to implementation may have limited effect on SRKW

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many successes increasing compliance with added capacity to visit sites before and during construction. Fund compliance inspectors, increase WDFW effectiveness monitoring funding • Ensure Shoreline Development Permits and Variance Permits pursuant to Shoreline Master Plans enforce the "need" for armoring when reviewing replacement of bulkheads • Fund increased staffing to communicate to local governments and land management agencies the riparian conditions necessary for the long-term survival of salmonids through the full range of environmental conditions, consistent with PHS riparian guidelines • Fund staffing for public awareness efforts around salmon, killer whales, and land use decisions						

NOTES ON INPUT, COMMENTS AND QUESTIONS FROM TASK FORCE ON THIS ACTION ON 6/14/18:

- What regulations is this action referring to specifically? (GMA, SMA? CAOs?) If there are state, federal, local then separate them out?
- Which habitat are we most concerned about for Chinook/SRKWs? Prioritize recommended actions here.
- Salmon recovery council priorities speak to these issues. Look there.
- What are the effects of current exemptions? Where is that important?
- Organize an evaluation of regulations at the local, state, and federal levels.

Comment [AH2]: Regions should be prepared to speak to specific priority regulations that need improved implementation, compliance monitoring and enforcement.

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- Differentiate between enforcement and implementation. (Note that Penny changed language to try to provide clarity... more discussion needed?)
- Across the boards, appropriate application of hydraulic code is failing. Issue is both implementation and enforcement. Easier to implement existing laws well? Need to put some attention on WDFW laws.
- HPA compliance – enhance civil authority. See notes from Justin Allegro (WDFW)
- May need to look at mitigation for cumulative impacts

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset
  All pods.

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management
- Does the action take climate change into account and if so how?
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
- Comments on current and potential funding sources and estimated gaps
- Additional considerations unique to Working Group, if appropriate:_____

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Action B

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Enhance/change habitat protection regulations, especially for key Chinook/SRKW habitats or areas Lower Columbia – need better integration of recovery priorities into laws, mitigation, and decision-making. Mitigation in particular needs to reflect the habitat priorities from the recovery plans. Coordination need. PS – Need changes to existing regulations, particular to eliminating SFR exemption, supporting more civil authority, regional definition of CAO, standards for riparian zones, shoreline setbacks. More detail to come in August. Highest astronomical tides as regulatory line. HC – Single-family exemptions also affect wetlands, floodplain, riparian, etc. All salmon recovery chapters highlight the key areas for increased protection.	H/M/L H	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • High Time for response to occur: • Intermediate (3-10 years) Degree of certainty: • High	H/M/L: M	Brief explanation of rating: Estimated cost to implement (in dollars): • Need to consider the degree to which there would be economic loss (indirect as opposed to direct implementation cost) • Costs for policy work are not extremely high Degree of certainty: • High	H/M/L L (politics)	Brief explanation of rating: Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Administrative complexity Degree of alignment with current federal and state law (versus requiring changes to laws): • Legislative code changes? Political/social feasibility: • Politically hard decisions • Economic loss • Limits development Technical feasibility: • Need better understanding of how to integrate salmon recovery priorities into land use planning • Need monitoring for compliance and effectiveness Degree to which it reinforces or leverages existing efforts: • More difficult than implementing laws already on the books

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As scalable to high priority watersheds. • Support a requirement for Net Ecological Benefit for Growth Management Plans and Shoreline Management Plans. • Evaluate ramifications and benefits of limitations around fair market value in state acquisition of priority chinook habitat acquisition, offer recommendations to legislature.						Degree of certainty: • High

Notes:

- GMA/SMA planning – net ecological benefit requirement as opposed to no net loss?
- Fair market value requirements for acquisition of lands need to be addressed. Barrier to acquisition currently is inability for acquisition to compete with bidders.
- Single family exemptions are the highest priority
- No net loss is not sufficient
- Aquaculture has few regulations and has impact that needs to be considered

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
- Links to existing programs, communities, groups, or mechanisms
- If and how each action could be evaluated, monitored and responsive to adaptive management

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- Does the action take climate change into account and if so how?
- Recommendations about where and when to implement each action, including sequencing (if not covered above in table)
- Social/cultural, economic, community, and environmental costs and benefits of actions (local and statewide), and potential ways to ameliorate any negative impacts. The equity of impacts will also be discussed
- Comments on current and potential funding sources and estimated gaps
- Additional considerations unique to Working Group, if appropriate:_____

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Action C (Not covered during July 17th call)

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Acquire important Chinook habitat for permanent protection (Action 3) Increase PSAR, SRFB, WCRI, ESRP, FBD, Streamflow Restoration, OCR and OCB funding, and other funding as appropriate to target specific actions to benefit Chinook. Specific examples include: Stillaguamish ? **Stillaguamish Flood Plain Acquisition** ~ $1.3 million matching funds to provide permanent floodplain protection to support Stillaguamish juvenile abundance and productivity and increases in spatial structure. Snohomish ? **Reiner Acquisition** ~ $800 thousand matching funds to acquire approximately 150 acres of priority river and slough riparian/floodplain property. Chehalis Aquatic Species Restoration Plan	H/M/L	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • High Time for response to occur: • Immediate (0-3 years) to Intermediate (3-10 years) Degree of certainty: •	H/M/L:	Brief explanation of rating: Estimated cost to implement (in dollars): • Degree of certainty: • Land prices may be prohibitive in some key areas	H/M/L	Brief explanation of rating: Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Degree of alignment with current federal and state law (versus requiring changes to laws): • Political/social feasibility: • Legislative/political will may be challenging Technical feasibility: • Difficult given current land use, high land prices, and number of willing sellers in key locations Degree to which it reinforces or leverages existing efforts: • Degree of certainty: • Need map of where development is likely to happen and habitat to acquire/protect most important areas for Chinook to benefit SRKW

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priority habitat acquisition projects with modeled Chinook benefit						

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset

Additional information (WG Meetings 4 & 5)

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- Severity of threat being addressed
- Information on integration (tradeoffs and complementarities across the actions under the three threat areas)
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Action D

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Accelerate habitat restoration, including fish blockages in areas most beneficial to SRKW (Action 4) ALSO CONSIDER IN THIS ACTION 'Increase and/or improve Hydro habitat mitigation for salmon recovery' Lower Columbia – 1) Best use of available habitat through reintroduction in Lewis and Cowlitz (captured in hydro) 2) About 50 miles of F/W production potential – reaches are specified and costs have been laid out ($3M/year for 10 years) 3) Estuarine restoration. Used by all populations. Accelerate work to achieve targets. 3300 acres over the next 5 years (SUBS, Bachelor Island, Chinook, etc) Upper Columbia – 1) Focus on enhancing spring Chinook – limiting factors are not clear. Need analysis and life cycle model (general biological strategy but no specific actions) 2) Summer Chinook not listed. If did	H/M/L H	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • High Time for response to occur: • Intermediate (0-3 years) for blockages, Long-term (10+ years for restoration) Degree of certainty: •	H/M/L: L	Brief explanation of rating: Large-scale, increased funding essential to get more projects completed Estimated cost to implement (in dollars): • Degree of certainty: •	H/M/L M (know what to do, it is hard, takes a long time, needs more resource and capacity)	Brief explanation of rating: Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Funding sources don't allow for the time it takes to sequence issues on the ground Degree of alignment with current federal and state law (versus requiring changes to laws): Political/social feasibility: • Need public education for why it is important • Alignment of all necessary implementation projects is difficult – need more capacity Technical feasibility: • Need to align approaches of many different species recovery goals • Need to consider climate change and resiliency Degree to which it reinforces or leverages existing efforts: • All recovery plans have scientific backing and many have priorities for habitat restoration already identified • NW Power CC Fish and Wildlife Program

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work on lower mainstem reaches, both populations would benefit 3) Enhance habitat in key hatchery areas. 4) Fish passage above Chief Joseph and Enloe dams (discussed in hydropower call) 5) Currently have a fish barrier tool that shows Intrinsic Potential of each area that could be opened up Puget Sound – May be looking at a more comprehensive estuary and pocket estuary initiative – need more focus on juvenile rearing. Each lead entity has 4-year workplan lists – need to respect the existing priorities. HC – Implement current recovery plans. Need bigger scales of restoration than what the funding allows now. Local level collaboration is also needed. Emphasize that local partners need to be on board. Coast – LWD scarcity from legacy forestry operations Passage Chehalis Dam concerns Chehalis EDT modeling and aquatic restoration strategy						currently funds many restoration projects – SRKW priorities could be added? • Current Chinook recovery goals do not include Orca needs – may need to review all recovery goals and increase the recovery targets • Could tie to incentives – makes restoration easier and compliance more likely (A & B) Degree of certainty: • Need to consider questions at project/watershed level around effectiveness

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Add Yakima, Snake PS Nearshore: • annual funding for Puget Sound Shore Friendly Programs • Increase funding for ESRP small grant program for highest priority shoreline armor removal or softening projects with anticipated Chinook benefit. • Increased funding for ESRP for other nearshore projects • Continue state support for necessary funding of PSNERP Tier 1 design and construction, 35% match of $460 million over 10-20 years (Duckabush, Nooksack, Skagit). • Urge Army Corp and OMB to free up Puget Sound and Adjacent Waters Funding for larger PSNERP list. Freshwater scalable: • Encourage State of Washington to urge improving ecosystem function through flow regime negotiated in Columbia River Treaty. Specific Projects (DFW list)						

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Chehalis Fund construction of designed reach-scale restoration projects in the Wynoochee, Satsop, Skookumcuck, Newaukem, and S. Fork Chehalis through OCB. Nooksack • **Middle Fork Nooksack Diversion Dam** ~ $6 million to provide fish passage at the Middle Fork Nooksack Diversion Dam, reopening 13-26 miles of habitat. • **Nooksack Tribe's Farmhouse Phase 4** ~ $1-3.3 million matching funds to construct engineered log jams to restore stable spawning and rearing habitat. Skagit • **Barnaby Reach** ~ $225 thousand matching funds evaluate feasibility of alternatives and complete preliminary study design to restore floodplain connectivity of Barnaby Reach which represents almost 3 miles of off-channel habitat. • **Hansen Creek Project** ~ $960 thousand matching funds to restore floodplain and channel connectivity by construction of meandering						

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channel with 74 log structures and upgrade of an undersized culvert to accommodate the new channel and flood plan hydrology. Stillaguamish ▫ **Leque Island Estuary Restoration** ~ $1-5.8 million matching funds to restore 250 acres of tidal marsh on Legue Island. ▫ **Gold Basin Landslide Stabilization** ~ $1.5 million matching funds to install a crib wall at the base of the slide adjacent to the Stillaguamish River. 5) Snohomish ▫ **Pilchuck Dam** ~ $1.5 million matching funds to remove an old water withdrawal facility to open up 37 miles of spawning and rearing habitat. 6) Dungeness ▫ **Lower Dungeness Floodplain** ~ $1-3 million matching funds to restore 112 acres of floodplain which includes levee setback and road relocation. ▫ **Kinkade Phase Floodplain Restoration** ~ $250-916 thousand matching funds to advance project to completion for acquisition of 16 acres and removal of hard armoring						

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and levee structure. Fish Passage and Screening • Increase technical assistance and compliance with screening criteria and laws to ensure that fish stay in rivers and streams and aren't lost to irrigation systems or municipal water systems ○ Increase funding and compliance for irrigation and domestic water diversion fish ○ Continue screening inventory and inspections ○ Irrigation pump screens • $3.9M for 8 fish passage/water corrections in the Wilson-Cherry watershed (Yakima) opening 6.2 miles of habitat (of 79 FBRB recommendations to governor for funding, these have the most Spring Chinook benefit)						

NOTES ON INPUT, COMMENTS AND QUESTIONS FROM TASK FORCE ON THIS ACTION ON 6/14/18:

- Location is very important

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- Can we execute habitat restoration that can help us with fishery recovery as well as SRKW recovery?
- Accelerate culvert replacement schedule.
- The Task Force will need to look at implementation capacity for steeply accelerating habitat restoration.
- Consider using condemnation for habitat restoration in areas identified as critically important for SRKW recovery.
- Do we need to do more intrusive restoration projects to get quicker results?
- Do we need to change the way we allocate restoration funding to focus on particular areas for SRKW and/or Chinook benefit?
- If we don't do the habitat protection piece then we will lose more habitat that we gain through these investments.
- Check out NPCC website – good info on climate change work – ranked the different Chinook watersheds for resiliency
- Authorize permanent application of and increased funding for the ESRP small grant program for highest priority projects for shoreline projects – could be folded in with PS focus on shorelines
- Refer to specific restoration projects that WDFW and NOAA have been developing for Pacific Salmon Treaty conversations.
- PS NERP Tier 1 projects are Nooksack, Skagit, Duckabush ($460M). State would have to match.
- Middle Fork Nooksack – could be fully funded by PSAR this year – waiting to see. Also been discussed in hydro discussion
- Floodplains is a huge focus of recovery plans
- Political pressure needed for the Skokomish floodplain passage issue
- Information that is being compiled through other efforts needs to be considered – Columbia Basin Partnership (Liz to send). Ecosystem based goals – not just harvestable

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset

Additional information (WG Meetings 4 & 5)

- Who has the authority to implement each action
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- Comments on current and potential funding sources and estimated gap
- Additional considerations unique to Working Group, if appropriate:_____

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Action E (Not covered during July 17th call)

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Create additional or bolster existing habitat protection and restoration incentives for landowners • Evaluate fair market value ramifications for priority chinook habitat acquisition • Enhance funding for enhanced wildlife forage within estuaries • Increase funding for Floodplains by Design • Increase funding for flexible incentives for restoring riparian on agricultural lands	H/M/L	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • Time for response to occur: • Degree of certainty: •	H/M/L:	Brief explanation of rating: Estimated cost to implement (in dollars): • Degree of certainty: •	H/M/L	Brief explanation of rating: Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Degree of alignment with current federal and state law (versus requiring changes to laws): • Political/social feasibility: • Technical feasibility: • Degree to which it reinforces or leverages existing efforts: • Degree of certainty: •

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset

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Additional information (WG Meetings 4 & 5)

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Action F

Action, including time and place for implementation	Effectiveness		Affordability		Ease of Implementation	
Restore/Protect forage fish habitat	H/M/L	Brief explanation of rating: Magnitude of benefit to SRKW (quantify if possible): • Time for response to occur: • Degree of certainty: •	H/M/L:	Brief explanation of rating: Estimated cost to implement (in dollars): • Degree of certainty: •	H/M/L	Brief explanation of rating: Regulatory feasibility (laws, regulations and treaties—including local, state, federal, international, tribal, etc.): • Degree of alignment with current federal and state law (versus requiring changes to laws): • Political/social feasibility: • Technical feasibility: • Degree to which it reinforces or leverages existing efforts: • Degree of certainty: •

Additional information (WG Meetings 2 & 3)

- Whether each action will improve conditions for all pods or a subset

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Additional information (WG Meetings 4 & 5)

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- Comments on current and potential funding sources and estimated gaps
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PREY WORKING GROUP
SOUTHERN RESIDENT KILLER WHALE (SRKW) TASK FORCE
AGENDA

Thursday, July 25, 2018 9:00 am – 4:00 pm
Natural Resources Building, Room 172
1111 Washington St. SE Olympia, WA 98504

Time	Agenda Item	Reference Materials	Presenter(s)
8:30 *(30 min)*	**Social/Networking Time over Coffee and Snacks** Meet fellow Working Group members and staff		
9:00 *(30 min)*	**Welcome & Introductions** • Introductions of Working Group members, staff and others • Review agenda and expected outcomes • Updates	• *Agenda* • *Consideration Matrices*	Abby Hook, facilitator (Hook Environmental; Cascadia Consulting Team)
9:30 *(75 min)*	**Hatchery Actions** • Review ongoing WDFW work • Review actions • ODFW net pen overview (Chris Kerns, ODFW)	• *Hatchery 1-pager*	Penny Becker, WDFW
10:45	***15-minute break***		
11:00 *(75 min)*	**Habitat Actions** • Review geographic priorities, gaps and overlaps • Forage Fish Discussion		Abby Hook, facilitator
12:15 *(30 min)*	**LUNCH** *Lunch will be provided for Working Group members and staff*		
12:45 *(75 min)*	**Integration across 4Hs and P**	• *Complete high level list of potential actions* • *Maps*	All
2:00	***15-minute break***		
2:15 *(75 min)*	**Review of Actions and Summary Ratings**		All Abby Hook, facilitator
3:30 *(15 min)*	**Other Issues/Next Steps** • Call for work group volunteers related follow up • Prep for Integration Workshop – Puyallup, WA • Reminder of upcoming meetings, locations, content • Meeting wrap-up		Abby Hook, facilitator
4:00	**Adjourn**		

s.21(1)(a)

s.21(1)(b)

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Wong, Eva

From: Shaikh, Sharlene
Sent: July-25-18 10:19 AM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: Draft Response Letter - RKW RSa for review
Attachments: Draft Response_RKW RSa_to HB.doc

Hi Heather,

The draft response is attached.

Page One is the basic text to be included in all letters.

Thanks,
Sharlene

Sharlene Shaikh
Biologist, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
sharlene.shaikh@dfo-mpo.gc.ca
Tel: 604-666-3811

Pages 823 to / à 827

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

s.21(1)(a)

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s.21(1)(b)

Dozie, Juachi

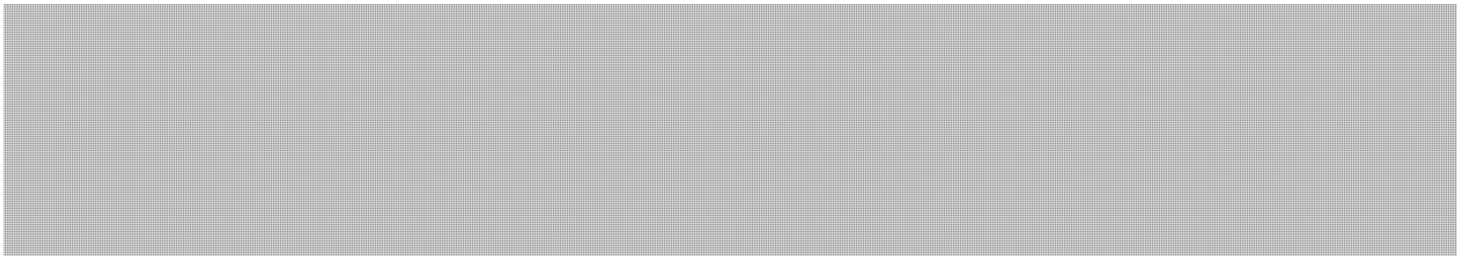
From: Brekke, Heather
Sent: July-25-18 2:23 PM
To: Jones, Lisa Ann; Shaikh, Sharlene
Subject: RE: Draft Response Letter - RKW RSa for review
Attachments: Draft Response_RKW RSa_HB.doc

My thoughts attached. I don't think we need to expand on the notification, but don't have a strong preference either way.

From: Jones, Lisa Ann
Sent: July-25-18 10:33 AM
To: Brekke, Heather
Subject: RE: Draft Response Letter - RKW RSa for review

Hi Heather,

Just looking over draft letter template text:



Just a thought.

Cheers
Lisa

From: Shaikh, Sharlene
Sent: July-25-18 10:21 AM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: RE: Draft Response Letter - RKW RSa for review

Here's a version with the tracked changes accepted. You can hide the comments as needed.

From: Shaikh, Sharlene
Sent: July-25-18 10:19 AM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: Draft Response Letter - RKW RSa for review

Hi Heather,

The draft response is attached.

Page One is the basic text to be included in all letters.

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Thanks,
Sharlene

Sharlene Shaikh
Biologist, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
sharlene.shaikh@dfo-mpo.gc.ca
Tel: 604-666-3811

Pages 830 to / à 833

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21(1)(b), 21(1)(a)

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Mbarushimana, Jenny

From: Leslie, Karen
Sent: July-25-18 8:03 AM
To: Thomson, Andrew; Davis, Neil; Brekke, Heather; Jones, Lisa Ann; Harber, Lee; Payne, Brigid; Webb, Cheryl; Grant, Paul; Cottrell, Paul
Cc: Malikian, Janine
Subject: RE: J35 update

Here is the Seattle times article

https://www.seattletimes.com/seattle-news/environment/southern-resident-killer-whales-lose-newborn-calf-and-another-youngster-is-ailing/

Karen Leslie
604-666-0395

From: Leslie, Karen
Sent: 2018–July-25 8:01 AM
To: Andy Thomson; Neil Davis; Brekke, Heather; Lisa Ann Jones; Lee Harber; Brigid Payne; Cheryl Webb; Paul Grant; Paul Cottrell
Subject: FW: J35 update
Importance: High

Some of you may already be aware of this news from other channels…

Karen Leslie
604-666-0395

From: Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>
Sent: Tuesday, July 24, 2018 23:21
To: Lowe, Carmel; MacConnachie, Sean; Kennedy, Eddy
Subject: J35 update

Hello all,

I have just returned from Haro Strait - earlier today, J35 gave birth to a calf off the Victoria waterfront. By the time the Center for Whale Research crew arrived, they reported that J35 was off Discovery Island, pushing a dead calf on her rostrum. The following details are from Ken Balcomb, CWR: "The dead calf would occasionally slip off her rostrum and sink, at which time J35 would dive down and retrieve the carcass, sometimes by mouthing the pectoral flipper and then balancing it on her head on the surface. The time between Mark's report and photographs of a calf and our CWR team observation of a dead calf was approximately one half hour. J35 carried the dead calf to the area of Hannah Heights San Juan Island for approximately four hours, and is still carrying it as far as we know".

Ken has sent a photo into the Seattle Times, so expect some coverage tomorrow.

Very disappointing and sad outcome.

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch

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Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

s.19(1)

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Dozie, Juachi

From: Brekke, Heather
Sent: July-25-18 8:16 AM
To: 'Lewis, Scott (EC)'; Scott Lewis [redacted]
Subject: FW: J35 update

[redacted] The description of how this mother tried to keep her calf alive. [redacted]

https://www.seattletimes.com/seattle-news/environment/southern-resident-killer-whales-lose-newborn-calf-and-another-youngster-is-ailing/

From: Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>
Sent: Tuesday, July 24, 2018 23:21
To: Lowe, Carmel; MacConnachie, Sean; Kennedy, Eddy
Subject: J35 update

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Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

s.19(1)

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Dozie, Juachi

From: Thornton, Sheila
Sent: July-25-18 10:54 AM
To: Sloan, Lara; Cottrell, Paul
Subject: RE: J35 update

Hi Lara – this was not the news we were hoping for – so disappointing.

J-35 is from the J-17 matriline – b. 1998. She has one calf (J47) from 2010.

Over the last 6 weeks, we have identified 75 individuals from the SRKW population. There are no new calves sighted.

The scientific community continues to express concern over the condition of J50, the fourth calf of J16.

KW have an ~18 month gestation period and pregnancy/calf loss is observed to be ; recent hormonal data from the SRKW population (Wasser et al, 2017) estimated a 69% pregnancy failure rate but acknowledges the likelihood of some false positives in the early gestation pregnancy results. However, half of those pregnancy losses (~35%) occurring in the later stages of the pregnancy.

Collection of samples to support a SRKW/NRKW comparison of fecal hormones is currently underway to identify whether SRKW pregnancy loss is significantly higher than what is experienced in the NRKW population. We will require at least two field seasons before preliminary data could be released.

Regards,

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Sloan, Lara
Sent: July-25-18 9:36 AM
To: Thornton, Sheila; Cottrell, Paul
Subject: FW: J35 update
Importance: High

Hi Sheila. This is so heartbreaking.
I am being asked for media lines on this. Can I get an update on the population? Are there any other calves you've seen? Have all of the SR pods returned?
Thank you.
[redacted] as of 2pm today, so if you can't get back to me by then, please work with Janine on this.
Thanks.

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Lara

From: Cottrell, Paul
Sent: July-24-18 10:14 PM
To: Davis, Neil; Thomson, Andrew
Cc: Greene, Annely; Sloan, Lara
Subject: FW: J35 update

Fyi

From: Lowe, Carmel
Sent: July-24-18 8:24 PM
To: Thomson, Andrew; Webb, Cheryl; Reid, Rebecca; Cottrell, Paul; McPherson, Arran; Laverdure, Louise; Landry, Jean; Nadeau, Simon
Subject: Fw: J35 update

Fyi

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>
Sent: Tuesday, July 24, 2018 23:21
To: Lowe, Carmel; MacConnachie, Sean; Kennedy, Eddy
Subject: J35 update

Hello all,

I have just returned from Haro Strait - earlier today, J35 gave birth to a calf off the Victoria waterfront. By the time the Center for Whale Research crew arrived, they reported that J35 was off Discovery Island, pushing a dead calf on her rostrum. The following details are from Ken Balcomb, CWR: "The dead calf would occasionally slip off her rostrum and sink, at which time J35 would dive down and retrieve the carcass, sometimes by mouthing the pectoral flipper and then balancing it on her head on the surface. The time between Mark's report and photographs of a calf and our CWR team observation of a dead calf was approximately one half hour. J35 carried the dead calf to the area of Hannah Heights San Juan Island for approximately four hours, and is still carrying it as far as we know".

Ken has sent a photo into the Seattle Times, so expect some coverage tomorrow.

Very disappointing and sad outcome.

Sheila

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Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
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Dozie, Juachi

From: Thornton, Sheila
Sent: July-25-18 12:02 PM
To: Sloan, Lara
Cc: Cottrell, Paul; Malikian, Janine; Bate, Dan
Subject: RE: Media Lines - Death of SRKW calf

I have followed up on the observations – the birth was not witnessed, so I have modified the information below to reflect the confirmed observations.

Cheers,

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Sloan, Lara
Sent: July-25-18 11:38 AM
To: Thornton, Sheila
Cc: Cottrell, Paul; Malikian, Janine; Bate, Dan
Subject: Media Lines - Death of SRKW calf

Hi Sheila. For your approval. The Minister's office is requesting these ASAP.

Issue:
On July 24, 2018 at 11:40 am, Southern Resident Killer whale J35 was observed off the Victoria waterfront with a calf. Approximately 30 minutes later, personnel from the Center for Whale Research were in attendance and photographed J35 carrying a dead calf on her rostrum. is a big loss for the Southern Resident population, whose numbers are dangerously low.

Media lines -

- The loss of any calf to the Southern Resident Killer whale population has a significant impact on population recovery.
- Over the last 6 weeks, DFO scientists have identified 75 individuals from the SRKW population around Southern Vancouver Island, with no new calves sighted.
- The scientific community continues to express concern over the condition of J50, a 3 year old juvenile who appears emaciated.

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- DFO scientists are collecting samples to support a comparison of fecal hormones to identify whether SRKW pregnancy loss is significantly higher than what is experienced in the NRKW population. Preliminary data from this field study will likely be available in late 2019.

previously approved messaging

· The Government of Canada is committed to the protection and recovery of the iconic and, culturally and ecologically significant, Southern Resident Killer Whale.

· The Minister of Fisheries, Oceans, and the Canadian Coast Guard and the Minister of Environment and Climate Change have determined that the Southern Resident Killer Whale is facing imminent threats to its survival and recovery.

· The Government of Canada is committed to protecting these whales, and is taking actions to protect and recover the species. We are weighing all the options to ensure protections are in place as rapidly as possible.

· We have taken and continue to take concrete action to protect Southern Resident Killer Whales, such as:

- Fisheries and Oceans Canada has introduced new salmon fishery management measures to increase prey availability and reduce disturbance from salmon fishing in three key Southern Resident Killer Whale foraging areas: Strait of Juan de Fuca, Gulf Islands and the mouth of the Fraser River. These measures will aim to reduce harvest of key chinook salmon stocks by 25-35% in northern and southern B.C., a key prey species for SRKW. The 25-35% reduction is a coastwide number to address long-term Chinook declines across the region, and is a separate measure not specific to SRKW. The foraging areas are specifically so that the Southern Resident Killer Whale can feed without competition and noise in known preferred areas for feeding.

- Full closures for recreational finfish and commercial salmon fisheries will be implemented in the Strait of Juan de Fuca and the Gulf Island. Partial closures will be put in effect for the mouth of the Fraser River.

o We have introduced new regulations that prohibit vessels from approaching Southern Resident Killer Whale closer than 200m—this will help minimize noise disturbance and allow the whales to feed more easily.

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Dozie, Juachi

From: Joseph Karl Gaydos <[redacted]
Sent: July-25-18 1:26 PM
To: John Durban
Cc: Brad Hanson; Mike Ford; Candice Emmons; Lynne Barre; Kenneth Balcomb; Hendrik Nollens; Steve Raverty; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Director Marine Mammal
Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition

Thank you for sharing John!
JOE

Joseph K. Gaydos
360-376-3910
[redacted]
www.seadocsociety.org

On Jul 25, 2018, at 10:15 AM, John Durban - NOAA Federal [redacted] wrote:

Please note I am copying Holly and Lance here - my collaborators on body condition measures from recent UAS-based aerial photogrammetry.

Attached is a plot of our Eye Patch Ratio (EPR; Fearnbach et al. unpublished data) for each of the members of the J16 matriline over repeated photogrammetry measurements from September 2015, May 2016, September 2016, May 2017 and September 2017. Our ongoing data analyses indicate this EPR measure is our most sensitive measure of body condition (basically fatness behind the head), which gives us the greatest power (lowest CV in repeat measurements) to detect differences over time. Vertical error bars are SD of repeat measurements in each sampling period. Horizontal lines link the same individual over time.

The BLACK line is J50. You will see that she was in significantly poorer condition in each of our last two sampling periods in 2017.

Note that the very low measure in September 2017 was J52, another calf of the same cohort, that died within weeks of our sampling, We hope we don't see J50 measuring to be this emaciated when we begin sampling in early September, and hope she is still around then.

Please note, these data are unpublished, but are provided to facilitate our discussion tomorrow. Please do not use or distribute without permission.

Thanks, John

<J50 EPR.jpeg>
- - - -

John W. Durban, Ph.D.

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Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

On Jul 24, 2018, at 5:11 PM, Joseph Karl Gaydos [redacted] wrote:

Hi All,

For those of you that responded, it sounds as if a **Thursday morning 8AM call** will be best to discuss concerns about J50's body condition and behavior. The call should be brief. For those of you that are able to participate, here are the details:

Conference Call Line:
call (515) 739-1032
[redacted]

Specifically, I think it would be good to discuss:
- do we need further documentation about her body condition or behavior?
- is she exhibiting signs of disease other than poor body condition?
- how was her body condition score last time it was measured via photogrammetry (Sept 2017, right John)?

NOAA and DFO may want to discuss
- is there a need to ask whale watch and other vessels to give her a larger space than is normally require? Is there a method for this?
- do we need to collecting any further diagnostic information that might help assess the underlying condition

Finally, here is a link to a short video that Katy Foster put together of J50 and the sampling Brad Hanson et al. conducted
https://vimeo.com/281354035/beece0b947
[redacted]

Best,
JOE

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Dozie, Juachi

From: John Durban - NOAA Federal <[redacted]>
Sent: July-25-18 10:16 AM
To: Joe Gaydos
Cc: brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Hendrik Nollens; Stephen AGRI:EX Raverty; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance
Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition

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Thanks, John

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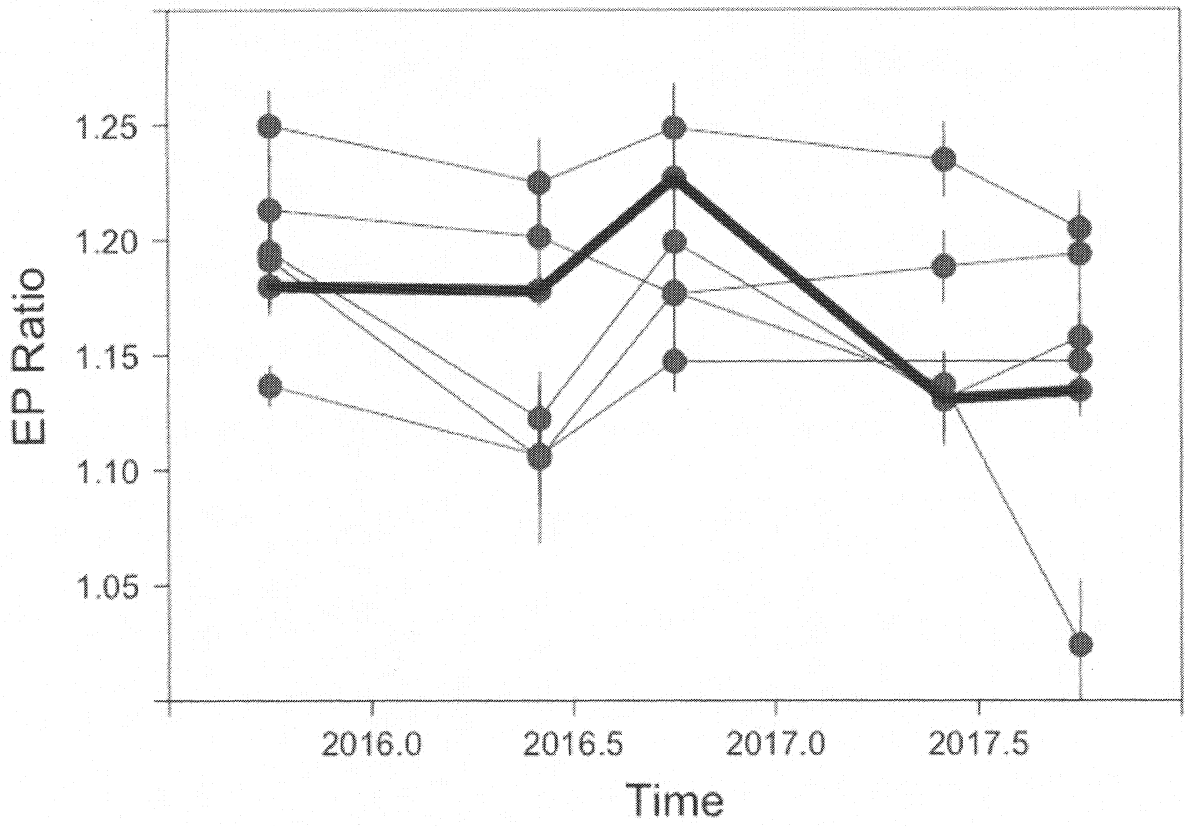

- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
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Finally, here is a link to a short video that Katy Foster put together of J50 and the sampling Brad Hanson et al. conducted
https://vimeo.com/281354035/beece0b947

Best,
JOE

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Dozie, Juachi

From: Sloan, Lara
Sent: July-25-18 9:42 AM
To: Cottrell, Paul
Subject: RE: Thursday 8AM call to discuss concerns about J50's nutritional condition

Hi Paul. Can you call me asap?

From: Cottrell, Paul
Sent: July-24-18 6:27 PM
To: Davis, Neil; Thomson, Andrew
Cc: Doniol-Valcroze, Thomas; MacConnachie, Sean; Sloan, Lara; Greene, Annely; Webb, Cheryl
Subject: FW: Thursday 8AM call to discuss concerns about J50's nutritional condition

Hi All,
This in from Ken (killer whale researcher Centre for Whale Research) . I have no further information on this. I will attempt to get photographs and additional information. If it is not already it will be posted on Ken's centre for whale research web page soon.
Best,
Paul

Paul Cottrell
Pacific Marine Mammal Coordinator
Fisheries and Oceans Canada
Fisheries Management Branch
Suite 200-401 Burrard
Vancouver, BC
V6C 3S4
(604) 666-9965

From: Kenneth Balcomb III [mailto
Sent: July-24-18 6:09 PM
To: Hanson; Joseph Karl Gaydos; Thornton, Sheila; Mike Ford; Steve Raverty; Cottrell, Paul; Hendrik Nollens; Lynne Barre; Candice Emmons; John Durban; Linda Rhodes
Cc: Dave Ellifrit; MARK MALLESON
Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition

Hello all,

The whale watch operators are all staying away from J50. The depression behind her cranium is slightly deepening, and we are keeping a file of all photographs that show her well; but, we are also not typically attempting to get closer than 200 yards. The WW operators are staying a kilometer or more away, and going to different groups of whales as opportunity permits. No need for an ask. J50 is not evidencing any sign of disease in the photographs we have since January. Her behavior is sometimes as depicted in Katy's video. Often she trails the other whales, but not always. It is interesting that the J16s remained in the core area while the other SRKWs went out the Strait of Juan de Fuca recently.

Today, Mark Malleson reported a new calf with the J17s off of the Victoria waterfront. By the time Dave Ellifrit and Michael Weiss of CWR San Juan arrived, J35 (daughter of J17) was off Discovery Island and

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she was pushing a dead calf on her rostrum. The dead calf would occasionally slip off her rostrum and sink, at which time J35 would dive down and retrieve the carcass, sometimes by mouthing the pectoral flipper and then balancing it on her head at the surface. The time between Mark's report and photographs of a calf and our CWR team observation of a dead calf was approximately one half hour. J35 carried the dead calf to the area of Hannah Heights San Juan Island for approximately four hours, and is still carrying it as far as we know. The other J16s did not exhibit unusual behaviors. Maybe they are getting used to this situation. We will be analyzing the photographs.

Mark, thanks for the photo. Dave, Michael and Mark, please let me know if this summary matches your observations.

Ken

On Jul 24, 2018, at 5:11 PM, Joseph Karl Gaydos <[redacted] wrote:

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[redacted]

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[redacted]

Best,
JOE

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Dozie, Juachi

From: Malikian, Janine
Sent: July-25-18 3:33 PM
To: Cottrell, Paul
Subject: RE: Thursday 8AM call to discuss concerns about J50's nutritional condition

Super, thanks Paul.

Janine

From: Cottrell, Paul
Sent: July-25-18 3:31 PM
To: Malikian, Janine
Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition

Of course, please do!

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Malikian, Janine
Sent: Wednesday, July 25, 2018 3:22 PM
To: Cottrell, Paul
Subject: RE: Thursday 8AM call to discuss concerns about J50's nutritional condition

Hi Paul,

Do you think it's OK for Comms to be listening in on the call tomorrow morning?

Thanks,
Janine

From: Malikian, Janine
Sent: July-25-18 10:22 AM
To: Cottrell, Paul
Subject: FW: Thursday 8AM call to discuss concerns about J50's nutritional condition

Hi Paul,

Do you think it would be OK / useful for us in Communications to listen in on this call? How about SAR program, can they call in? If not, we can get the info from you later.

Thanks,
Janine

Janine Malikian
Communications Advisor | Conseillère en Communications
Fisheries and Oceans Canada | Government of Canada
Pêches et Océans Canada | Gouvernement du Canada
200-401 Burrard Street | Pièce 200 401, rue Burrard
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4

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Janine.Malikian@dfo-mpo.gc.ca
Tel/Tél: 604-666-6766 | Fax/Télécopieur: 604-666-1847
Follow us on Twitter! @DFO_Pacific / Suivez-nous sur Twitter! @MPO_Pacifique
Fisheries and Oceans Canada | Pêches et Océans Canada

From: Cottrell, Paul
Sent: July-24-18 6:27 PM
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Cc: Doniol-Valcroze, Thomas; MacConnachie, Sean; Sloan, Lara; Greene, Annely; Webb, Cheryl
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Paul Cottrell
Pacific Marine Mammal Coordinator
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V6C 3S4
(604) 666-9965

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[redacted]

Best,
JOE

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Dozie, Juachi

From: MacConnachie, Sean
Sent: July-25-18 12:52 PM
To: Sloan, Lara; Cottrell, Paul; Doniol-Valcroze, Thomas; Davis, Neil; Malikian, Janine
Subject: RE: URGENT - Media Lines - Death of SRKW calf

Although the concern about J50 is real, I think this bullet is a separate issue and should be removed

From: Sloan, Lara
Sent: July-25-18 12:10 PM
To: Cottrell, Paul; Doniol-Valcroze, Thomas; MacConnachie, Sean; Davis, Neil; Malikian, Janine
Subject: URGENT - Media Lines - Death of SRKW calf
Importance: High

Hi. Any comments or concerns before I send these to Andy Thomson and Carmel Lowe for approval? Sheila Thornton has approved. The Minister's office is requesting these ASAP.
Thank you,
Lara

Issue:
On July 24, 2018 at 11:40 am, Southern Resident Killer whale J35 was observed off the Victoria waterfront with a calf. Approximately 30 minutes later, personnel from the Center for Whale Research were in attendance and photographed J35 carrying a dead calf on her rostrum. is a big loss for the Southern Resident population, whose numbers are dangerously low.

Media lines -

- The loss of any calf to the Southern Resident Killer whale population has a significant impact on population recovery.
- Over the last 6 weeks, DFO scientists have identified 75 individuals from the SRKW population around Southern Vancouver Island, with no new calves sighted.
- The scientific community continues to express concern over the condition of J50, a 3 year old juvenile who appears emaciated.
- DFO scientists are collecting samples to support a comparison of fecal hormones to identify whether SRKW pregnancy loss is significantly higher than what is experienced in the NRKW population. Preliminary data from this field study will likely be available in late 2019.

previously approved messaging

· The Government of Canada is committed to the protection and recovery of the iconic and, culturally and ecologically significant, Southern Resident Killer Whale.

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- The Minister of Fisheries, Oceans, and the Canadian Coast Guard and the Minister of Environment and Climate Change have determined that the Southern Resident Killer Whale is facing imminent threats to its survival and recovery.

- The Government of Canada is committed to protecting these whales, and is taking actions to protect and recover the species. We are weighing all the options to ensure protections are in place as rapidly as possible.

- We have taken and continue to take concrete action to protect Southern Resident Killer Whales, such as:

  - Fisheries and Oceans Canada has introduced new salmon fishery management measures to increase prey availability and reduce disturbance from salmon fishing in three key Southern Resident Killer Whale foraging areas: Strait of Juan de Fuca, Gulf Islands and the mouth of the Fraser River. These measures will aim to reduce harvest of key chinook salmon stocks by 25-35% in northern and southern B.C., a key prey species for SRKW. The 25-35% reduction is a coastwide number to address long-term Chinook declines across the region, and is a separate measure not specific to SRKW. The foraging areas are specifically so that the Southern Resident Killer Whale can feed without competition and noise in known preferred areas for feeding.

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s.19(1)

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Dozie, Juachi

From: John Durban - NOAA Federal <[redacted]>
Sent: July-25-18 7:36 PM
To: Joe Gaydos
Cc: brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Hendrik Nollens; Stephen AGRI:EX Raverty; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance
Subject: An update..

Dear Colleagues,

Given the recent set of bad news about SRKWs, and increased interest in their body condition, we have decided to take a chance and try to get some new photogrammetry data next week. I will be partnering with Holly (SR3) to do a few days on the water around San Juan Island, with the goal of obtaining photogrammetry images of at least the J16s (including J50) and perhaps other SRKWs.

Given our bad luck in May and June of not overlapping with SRKWs in our time around SJI, this would give us the opportunity to collect images that may "rescue" our ability to assess the direction of change in body condition at the time of our main population sample in September.

I hope to be on the call tomorrow, but I have to reschedule some events to make time for next week. If I am not on the call, Holly can certainly speak to body condition data and plans.

Thanks, John

- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

On Jul 25, 2018, at 10:15 AM, John Durban - NOAA Federal <[redacted]> wrote:

Please note I am copying Holly and Lance here - my collaborators on body condition measures from recent UAS-based aerial photogrammetry.

Attached is a plot of our Eye Patch Ratio (EPR; Fearnbach et al. unpublished data) for each of the members of the J16 matriline over repeated photogrammetry measurements from September 2015, May 2016, September 2016, May 2017 and September 2017. Our ongoing data analyses indicate this EPR measure is our most sensitive measure of body condition (basically fatness behind the head), which gives us the greatest power

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(lowest CV in repeat measurements) to detect differences over time. Vertical error bars are SD of repeat measurements in each sampling period. Horizontal lines link the same individual over time.

The BLACK line is J50. You will see that she was in significantly poorer condition in each of our last two sampling periods in 2017.

Note that the very low measure in September 2017 was J52, another calf of the same cohort, that died within weeks of our sampling, We hope we don't see J50 measuring to be this emaciated when we begin sampling in early September, and hope she is still around then.

Please note, these data are unpublished, but are provided to facilitate our discussion tomorrow. Please do not use or distribute without permission.

Thanks, John

<J50 EPR.jpeg>

- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

On Jul 24, 2018, at 5:11 PM, Joseph Karl Gaydos < [redacted] wrote:

Hi All,

For those of you that responded, it sounds as if a **Thursday morning 8AM call** will be best to discuss concerns about J50's body condition and behavior. The call should be brief. For those of you that are able to participate, here are the details:

Conference Call Line:
call (515) 739-1032
[redacted]

Specifically, I think it would be good to discuss:
- do we need further documentation about her body condition or behavior?
- is she exhibiting signs of disease other than poor body condition?
- how was her body condition score last time it was measured via photogrammetry (Sept 2017, right John)?

NOAA and DFO may want to discuss
- is there a need to ask whale watch and other vessels to give her a larger space than is normally require? Is there a method for this?
- do we need to collecting any further diagnostic information that might help assess the underlying condition

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Finally, here is a link to a short video that Katy Foster put together of J50 and the sampling Brad Hanson et al. conducted
https://vimeo.com/281354035/beece0b947

Best,
JOE

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Dozie, Juachi

From: Jenkins, Randy
Sent: July-25-18 7:44 AM
To: Burns, Adam; Thomson, Andrew; Davis, Neil
Cc: Scott, Paul G
Subject: Fw: Update on SRKW announced measures
Attachments: June 22 announcement update July 25.docx

Fyi...

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>
Sent: Wednesday, July 25, 2018 08:10
To: Leslie, Karen; LaPointe, Jeanette; Jenkins, Randy; Scott, Paul G; Goodier, Gwen (EC) (gwen.goodier@canada.ca); Sanders , Michelle (michelle.sanders@tc.gc.ca); christopher.marshall@canada.ca; mary-ann.spicer@canada.ca; Nadeau, Simon; Harber, Lee; Fagan, Ashley
Cc: Thorleifson, Erika; Winfield, Nicholas
Subject: Update on SRKW announced measures

Hi Everyone

In addition to the responses to the questions and concerns highlighted in the July 16 EJ letter we thought it might also be appropriate to provide an update for officials attending the SRKW meeting on Monday to also have back pocket information on the actions to date/status on the announcements that have been made. We had developed the attached table – again in a very simple format – to compile this information and are seeking your help to update and verify. Comments by COB today Ottawa time would be appreciated. Please add to the table if there is anything that we might have missed.

Thanks
Corina

From: Busby, Corina
Sent: 2018–July-24 2:27 PM
To: Leslie, Karen; LaPointe, Jeanette; Jenkins, Randy; Scott, Paul G (Paul.G.Scott@dfo-mpo.gc.ca); Goodier, Gwen (EC) (gwen.goodier@canada.ca); Sanders , Michelle (michelle.sanders@tc.gc.ca); christopher.marshall@canada.ca; mary-ann.spicer@canada.ca; Nadeau, Simon; Harber, Lee
Cc: Thorleifson, Erika (Erika.Thorleifson@dfo-mpo.gc.ca); Winfield, Nicholas
Subject: Responses to EJ concerns

Hi All,

Please find attached a table with the questions and concerns raised in the EJ letter dated July 16th, 2018. Responses are required to support departmental officials during the multi-stakeholder meeting in Vancouver on Monday. Please could you provide responses back to myself and Erika by COB (Ottawa time) tomorrow and we will compile into a single document. Please add questions we might have missed and distribute to others if anyone should have been included on the distribution list.

Thanks

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Corina

Corina Busby
Manager, Operations, Species at Risk
Fisheries and Oceans Canada / Government of Canada
200 Kent Street, 10W058
corina.busby@dfo-mpo.gc.ca / Tel: 613-218-5945

Gestionnaire des opérations, Espèces en péril
Pêches et Océans Canada / Gouvernement du Canada
200 Rue Kent, 10W058
corina.busby@dfo-mpo.gc.ca / Tél. 613-218-5945

s.69(1)(g) re: (a)

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July 25, 2018

Status of SRKW announced measures

Announcement	Status
National aerial surveillance program (NASP)	Unchanged – plan is to acquire aircraft this fiscal year. TC – any further updates?
Creation of a SRKW Indigenous and Multi-stakeholder group	Participants invited and inaugural meeting scheduled for July 30, 2018 in Vancouver.
Lateral displacement trial	Plans are in progress; scheduled to begin in mid-August. TC – any further updates?
Haro Strait voluntary slowdown	The trial began on July 12 and will continue until September 15 with a possible extension to October 31. • 15 kn or less for vehicle carriers, cruise and container vessels • 12.5 kn or less for bulkers, tankers, Washington State Ferries and government vessels TC – any further updates?
Noise management plans	Unchanged - BC Ferries have agreed to be the first operator to create noise management plan. TC- Any updates?
Hydrophone deployment	?
MMR Amendment	The amended MMRs were published July 11, 2018 and are in force.
Marine mammal response program	Plans are moving forward. Need update from RM
Chinook Salmon prey availability	Ongoing as announced – closed areas and catch reductions.
Science for killer whale (DFO)	• Marine mammal megafauna survey is underway • DFO Science – any updates?
Science for killer whale (ECCC)	ECCC – any updates?
Whale innovation challenge prize	Unchanged. The contract for initiating the prize is underway. DFO Comms – any updates?
Critical Habitat	The external review on the draft amended Recovery Strategy incorporating the newly proposed areas as CH has just ended. The proposed version will be posted to the SAR public registry for a 60d public comment period in mid-August. Plans are in progress to establish the CHO by December 2018.
Increasing regulatory controls for contaminants of concern for whales and their prey	ECCC – any updates?
Increased compliance and enforcement	C&P – update on activities

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Dozie, Juachi

From: Jackson, Corey
Sent: July-25-18 5:42 PM
To: Thomson, Andrew; Davis, Neil; Nener, Jennifer
Cc: Murdoch, Sarah; Kristensen, Freya
Subject: Urgent Request - FM info for Regional Overview DECK (Min Briefings next week)
Attachments: Minister Pacific Region Briefing Deck July 26 2018v3.ppt

Hi Andy, Jennifer, Neil

We've been asked to put together a Regional Overview deck for the Minister's briefings next week. Sarah has been working with Rebecca on the overview/structure. Attached is the working draft.

The RDG has asked to include some high-level information on the status of the fisheries for 2018 (including salmon, pelagics, shellfish, etc.). Basically populating slide 8 (also pasted below).

Wondering if you guys have anything off the shelf or could pull some information together?

Unfortunately it's due tomorrow (Thursday) at 10am PST so any info you can provide by then would be great.

Thanks and apologies for the short turnaround.

Corey

Regional Context –
2018 Status of Pacific Fisheries

- Salmon
  - Sockeye: 2018 Fraser River Sockeye returns expected to be below predicted, similar to 2017; Nass River Sockeye returns in 2018 expected to be sufficient to support some fisheries; Skeena…
  - Chinook
  - Coho
  - Chum
  - Pink
- Groundfish
- Shellfish
- Pelagics

8

Corey Jackson

Policy Branch
Fisheries and Oceans Canada / Pacific Region
Corey.Jackson@dfo-mpo.gc.ca / Tel: 604-666-1015

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Pêches et Océans Canada / Région du Pacifique
Corey.Jackson@dfo-mpo.gc.ca / Tél. : 604-666-1015

Government of Canada / Gouvernement du Canada

Canada

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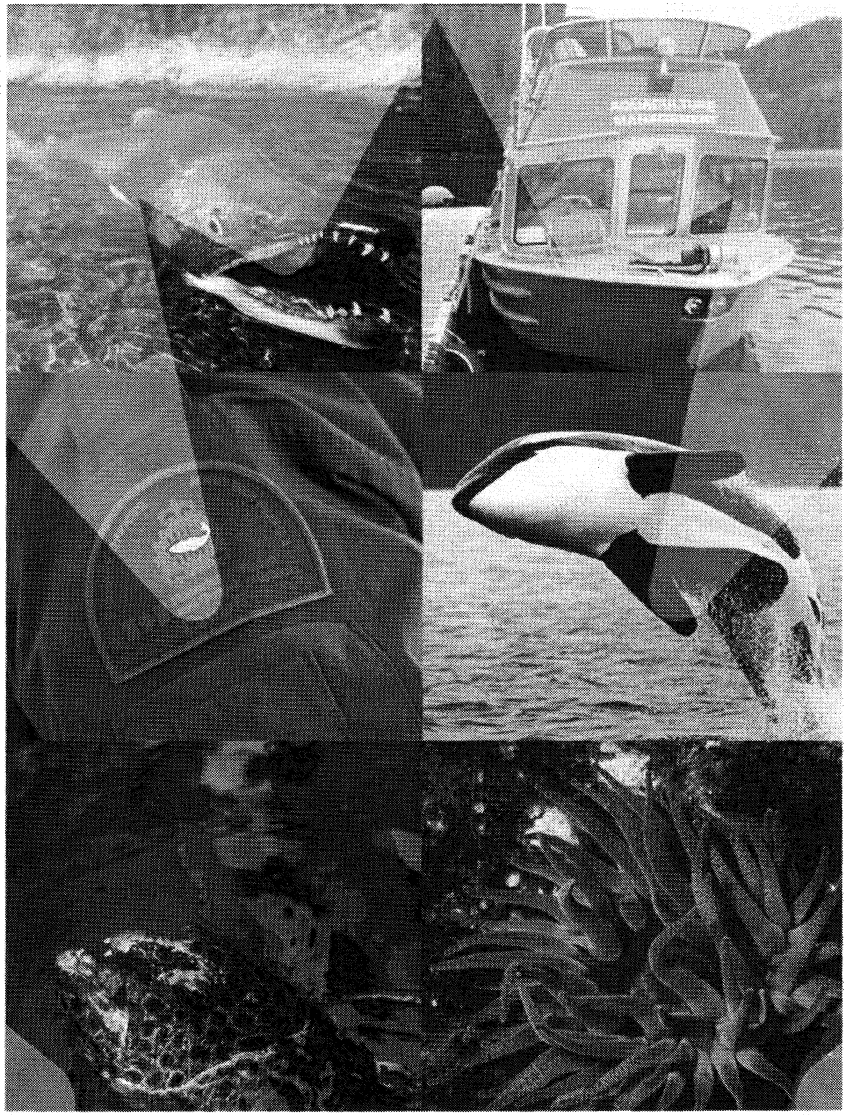
Pacific Region Regional Overview

Briefing Deck for Minister

July 2018



Canada

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Purpose and Overview

The purpose of this deck is to provide you with:

- a **Brief Overview** of the Pacific Region
- **Regional Context** (i.e. fisheries status and economic value, Indigenous and stakeholder perspectives)
- **Current Hot Issues**
  - Aquaculture
  - Pacific Salmon
  - Pacific Salmon Treaty
  - Aquatic Invasive Species (including mussels)
  - Pacific Science Enterprise Centre
  - Species at Risk Act

Other key regional issues which will be covered as part of other briefings include: Reconciliation; Marine Conservation Targets/Marine Spatial Planning and Southern Resident Killer Whales

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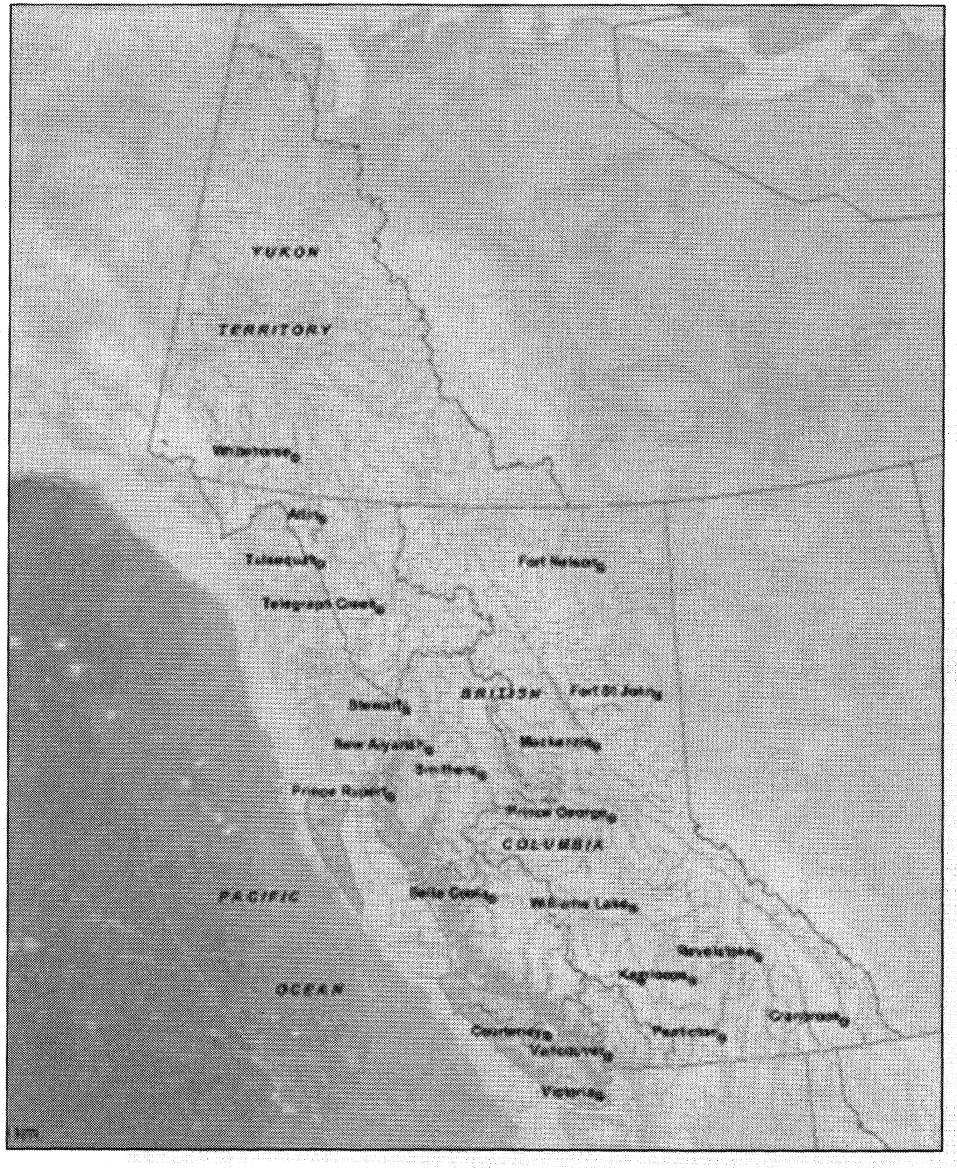
Regional Overview: **Geography**

- Pacific Region is the largest of DFO's five Regions
  - 27,000 km of coastline
  - 105 river systems
- Extends from the southern tip of Vancouver Island in British Columbia to Old Crow flats in Yukon
- Federally-managed commercial fisheries in the Region cover thirty different species
- Over 200 First Nations



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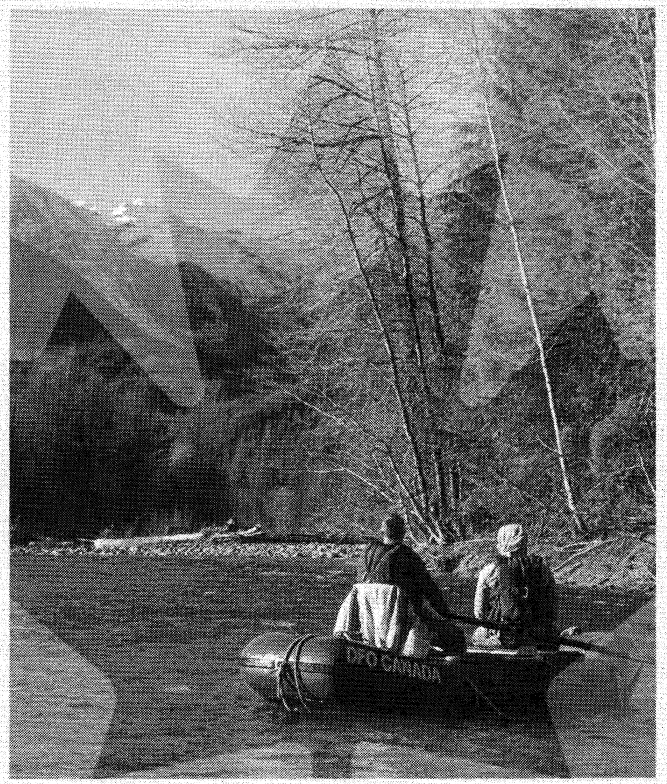
Regional Overview – **DFO Pacific**

- Over 1,400 DFO employees work in the Pacific Region, spread among DFO's Regional Headquarters in Vancouver, area offices in Nanaimo, Delta, Prince Rupert, Whitehorse, four major research facilities, and over thirty communities across BC and Yukon.
- The Region also includes 19 major fish enhancement facilities, six wharfs at major facilities and 105 small craft harbours.
- Two unique national programs:
  - BC Aquaculture Regulatory Program
  - Salmonid Enhancement Program
- Annual Operating Budget: $198,762 M (2017-18)
- Close working relationship and linkages with CCG Western Region



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Regional Overview: **How we are organized**

- **Fisheries Management**
  - Resource Management, **Aquaculture**, Aboriginal Negotiations, Indigenous Programs
- **Ecosystems Management**
  - Oceans, Fisheries Protection, **Salmonid Enhancement,** Species at Risk
- **Science**
  - Ocean Sciences; Ecosystem Science; Aquatic Resources, Research and Assessment; Aquatic Diagnostics, Genomics and Technology; Hydrographic Service
- **Conservation & Protection**
  - Stewardship and Education; Monitoring and Surveillance; Major Case Management
- **Small Craft Harbours**
  - Harbour Planning, Infrastructure, Harbour Management
- **Supported by:**
  - Policy and Economic Analysis; Real Property, Safety & Security; Finance; Human Resources; Communications; IMIT

s.21(1)(a)

s.21(1)(b)

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Regional Overview:
Top Ten 2018-2020 Strategic Priorities

Operational

1. [redacted]
2. [redacted]
3. [redacted]
4. *SKRW Protection and Recovery*
5. [redacted]
6. [redacted]
7. [redacted]
8. [redacted]

Corporate

9. [redacted]
10. [redacted]

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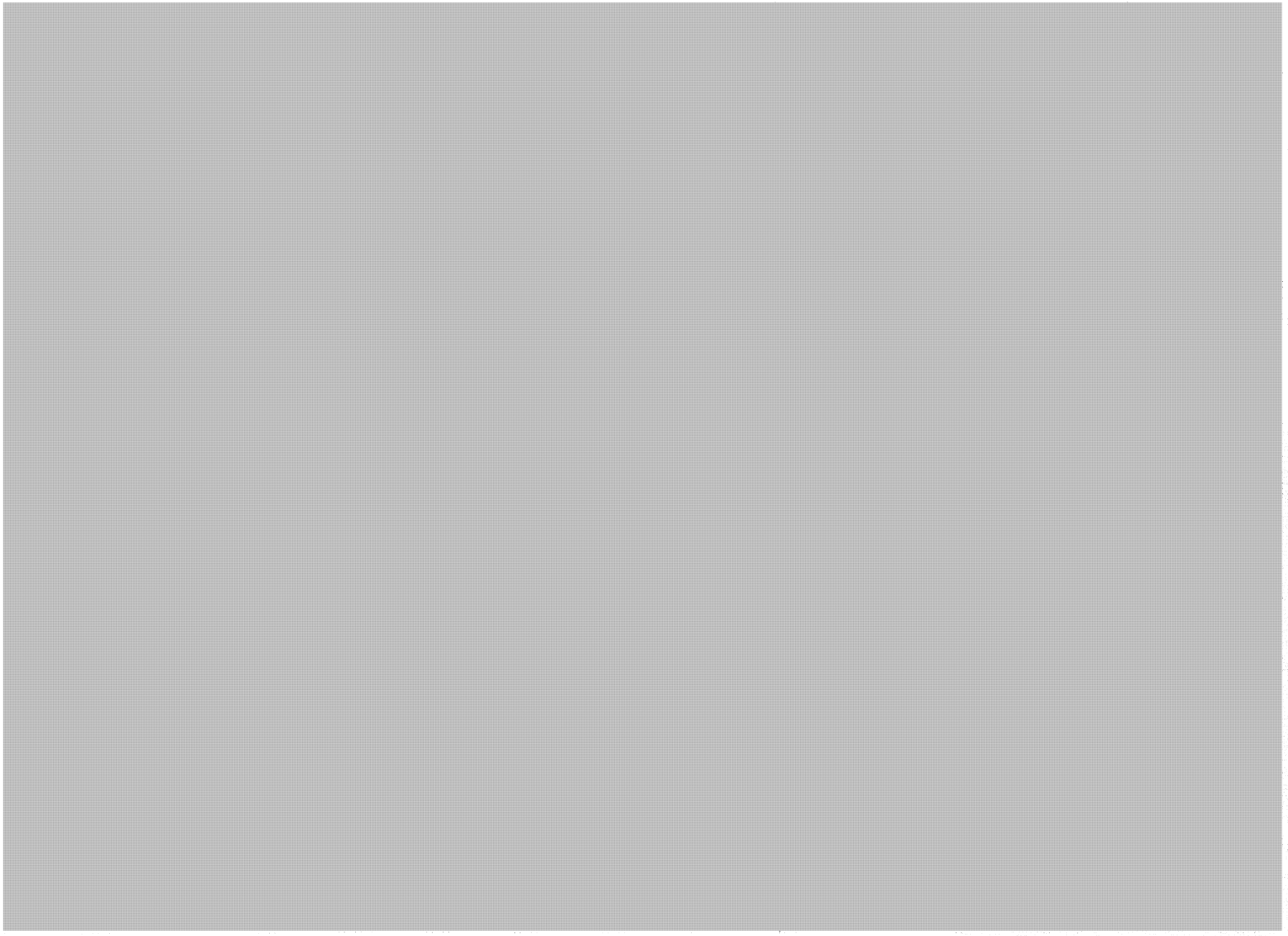

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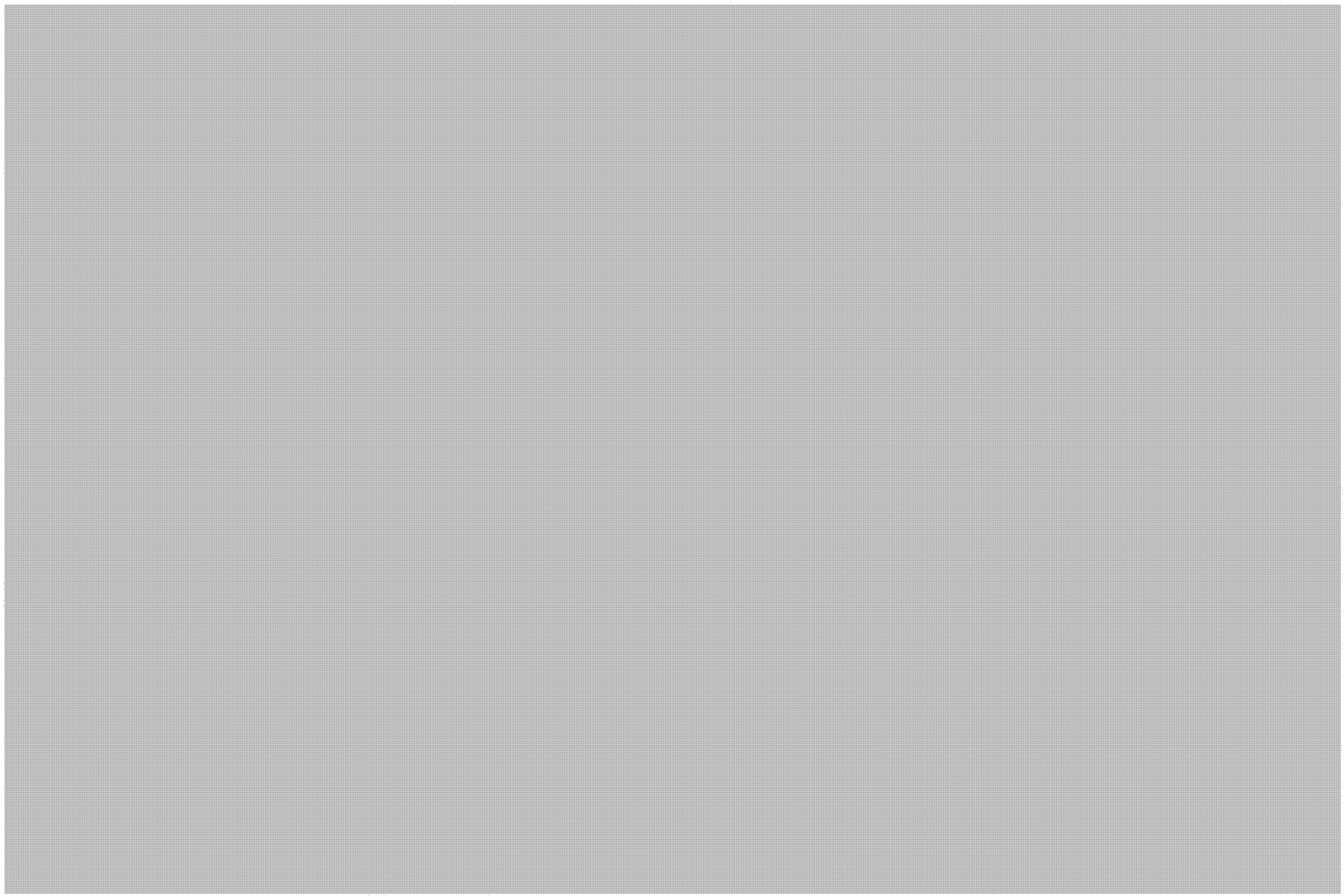

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Current Hot Issues for Pacific Region

[redacted]

Other key Pacific issues which will be covered as part of other briefings include: [redacted] Southern Resident Killer Whales

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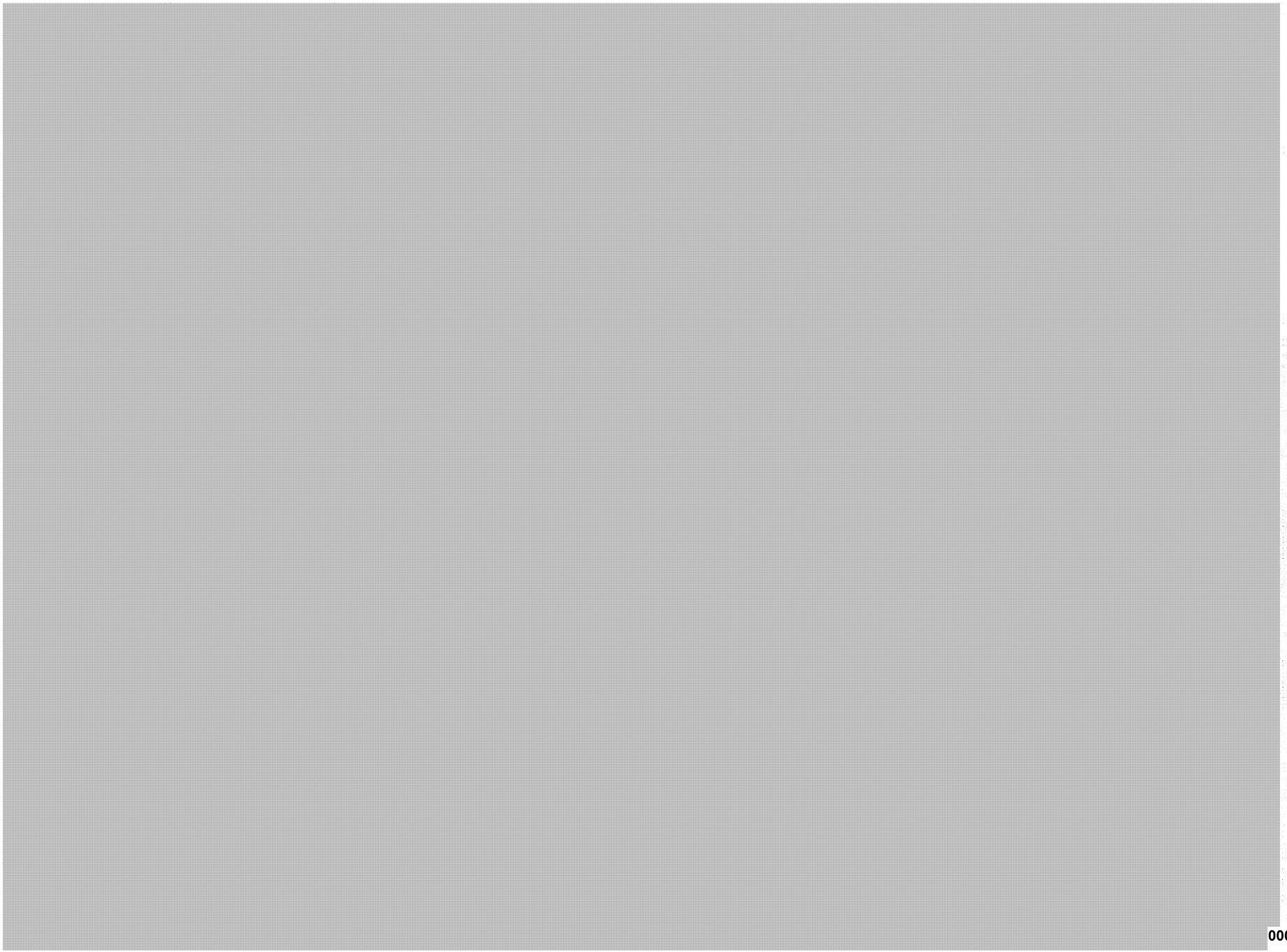

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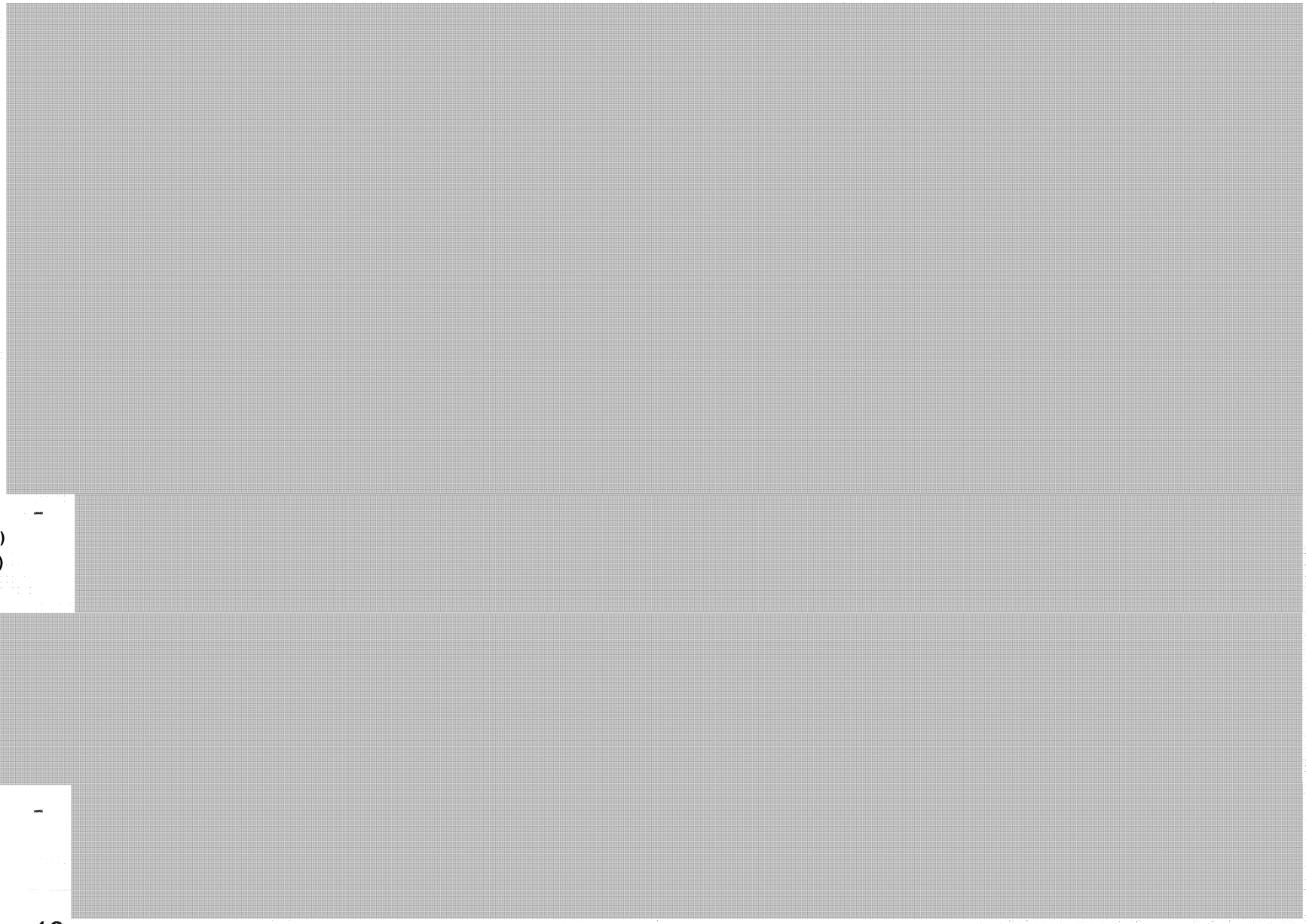

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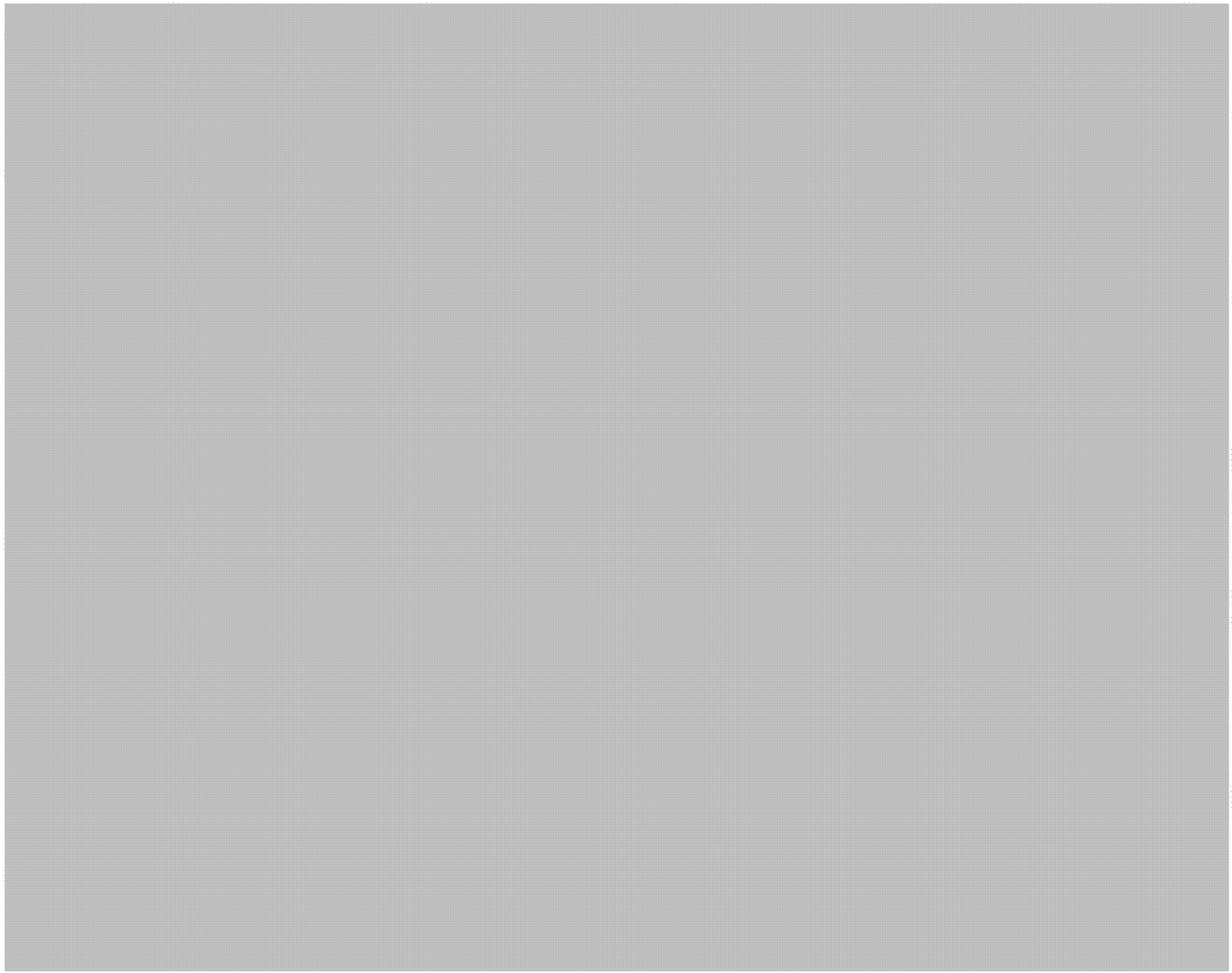

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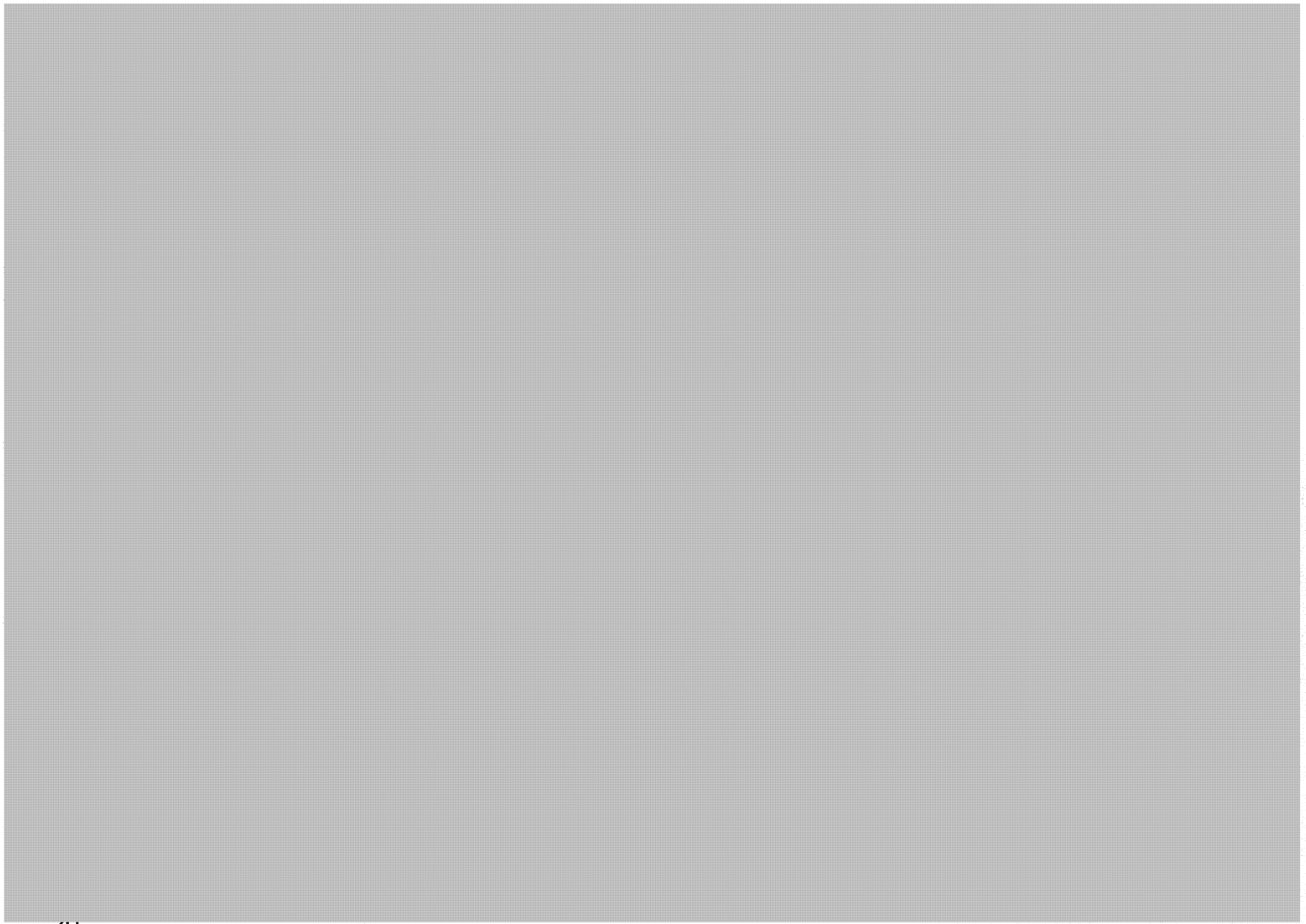

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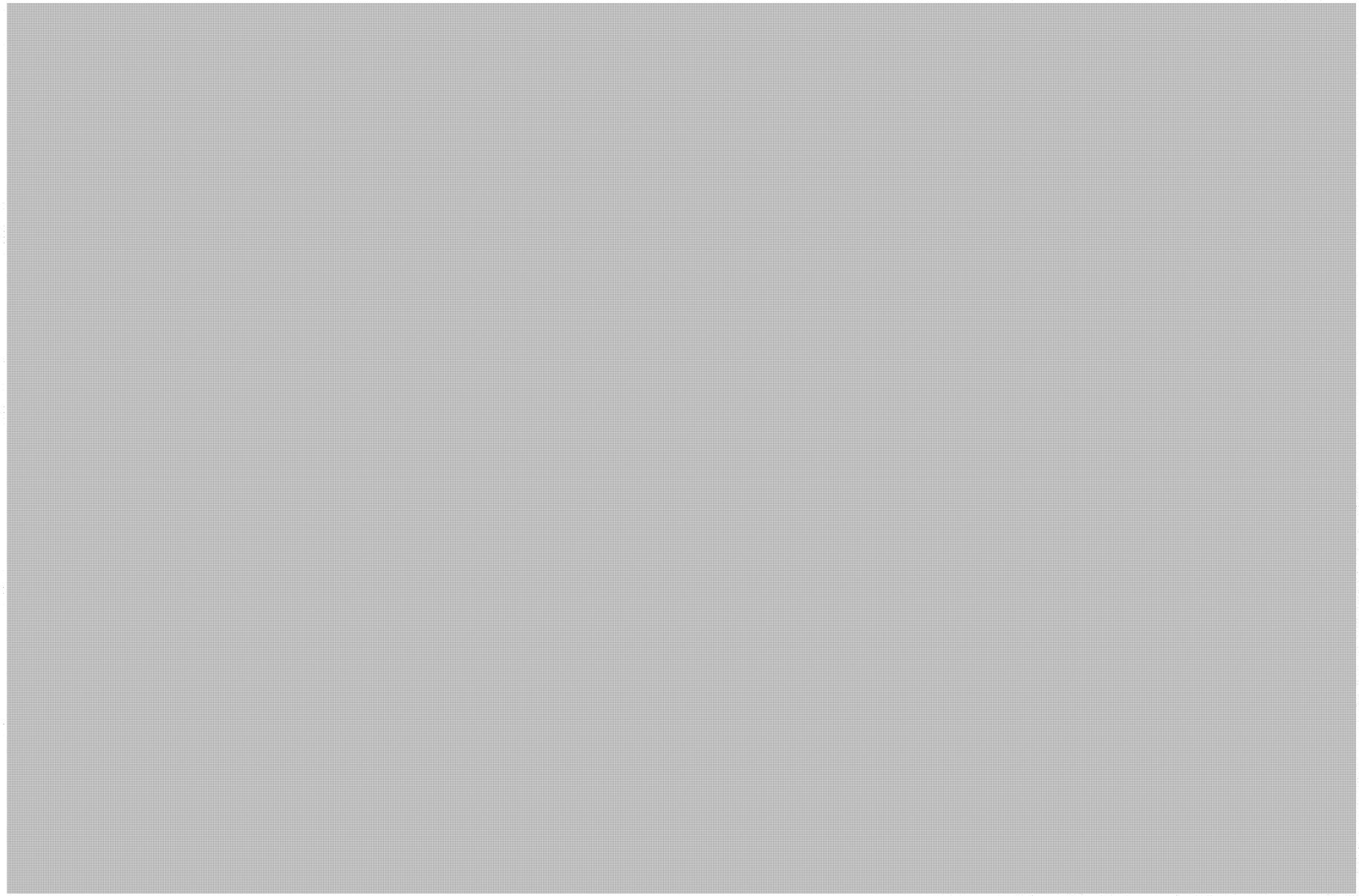

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s.69(1)(g) re: (e)

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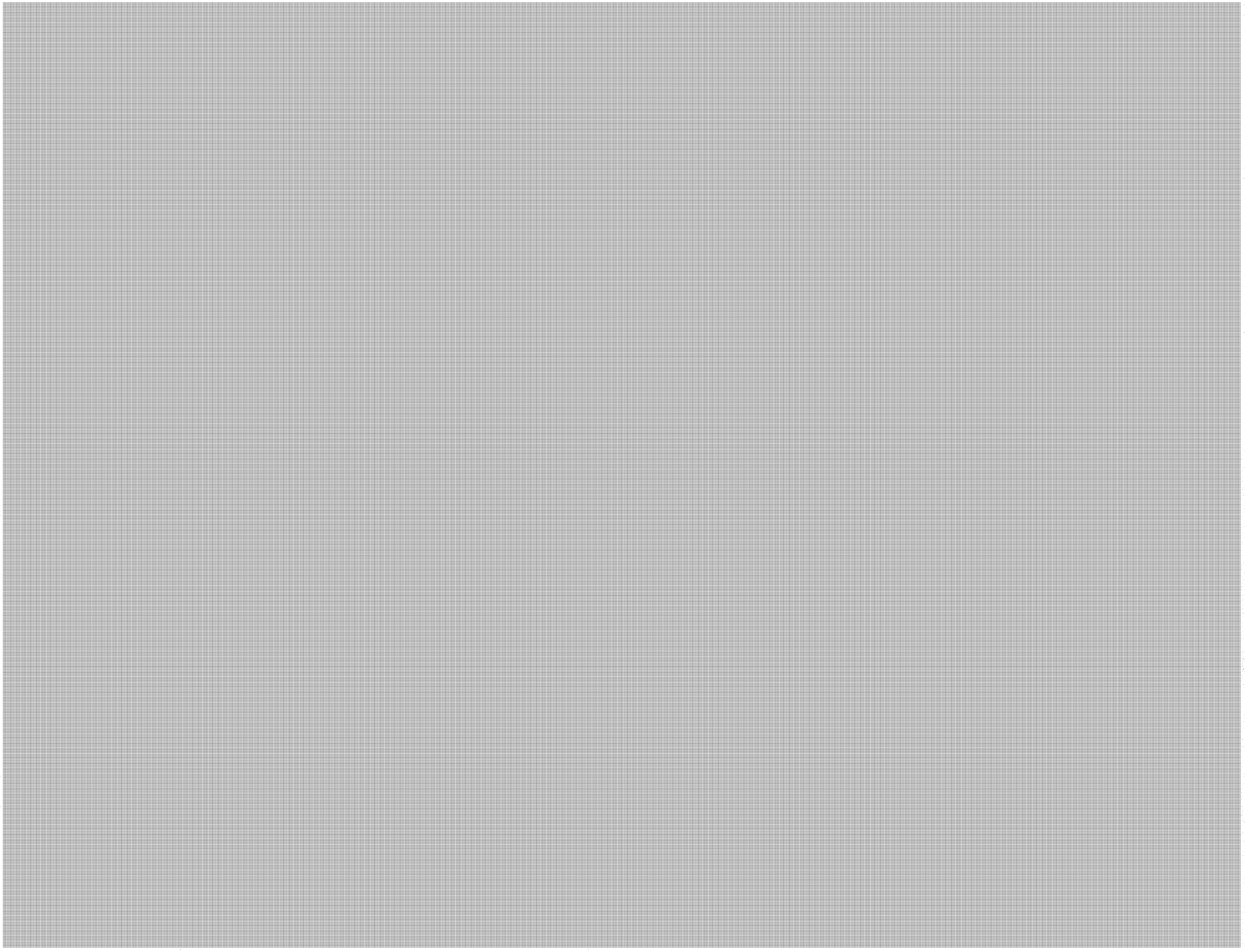

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s.69(1)(g) re: (a)
s.69(1)(g) re: (e)

Southern Resident Killer Whales

Issue:

- Management measures to protect endangered Southern Resident killer whales (SRKW) .

Context:

- The current population of 75 whales, listed as endangered under the *Species at Risk Act* (SARA), are threatened due to: 1) physical and acoustic disturbance from vessel traffic; 2) limited availability of Chinook salmon (their key prey); and 3) contaminants.
- Ministers of DFO and ECCC determined, in May 2018, that the population is facing imminent threat to survival and recovery. Fisheries management measures were put in place spring/summer 2018 to address the threat of prey availability, including fisheries closures in three key foraging areas and 25-35% coastwide reductions in Chinook fishing opportunities.
- Other key measures include: amended *Marine Mammal Regulations* that increase minimum approach distances for all vessels to reduce disturbances.
- DFO is amending the Species at Risk Recovery Strategy to include additional areas of Critical Habitat for SRKW.
- Ecojustice, representing 5 environmental groups, may seek a court order compelling Ministers to make a recommendation to the Governor in Council for an Emergency Order for the protection of SRKW under SARA.

Next Steps / Decisions:

- Continue Multi-Stakeholder and Indigenous Working Group for SRKW (meeting July 30th).
-

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Davis, Neil

From: Leslie, Karen
Sent: Wednesday, July 25, 2018 8:34 AM
To: Davis, Neil; Nener, Jennifer; Cottrell, Paul; Eros, Carole; Spence, Brenda
Cc: Brekke, Heather; Thomson, Andrew; Busby, Corina
Subject: RE: SRKW [redacted]

Hi all –

I have followed up w NHQ and it has been confirmed that the follow-up call will be scheduled for mid-next week. So, please provide me w any comments in track changes by **Noon Monday, July 30**, and I will compile and send to NHQ that afternoon.

Please let me know if you have questions/comments.

Cheers,
Karen

Karen Leslie
604-666-0395

From: Leslie, Karen
Sent: 2018–July-24 10:45 AM
To: Davis, Neil; Nener, Jennifer; Cottrell, Paul; Eros, Carole; Spence, Brenda
Cc: Brekke, Heather; Thomson, Andrew
Subject: RE: SRKW [redacted]

Thanks Neil,

I will also put myself out as point person for coordinating input into a Pac Region response, so please send comments and input through to me and I will compile.

I'll be following up on the timelines and your questions below, [redacted]

[redacted]

Karen Leslie
604-666-0395

From: Davis, Neil
Sent: 2018–July-24 9:52 AM
To: Nener, Jennifer; Cottrell, Paul; Eros, Carole; Spence, Brenda
Cc: Brekke, Heather; Thomson, Andrew; Leslie, Karen
Subject: FW: SRKW [redacted]
Importance: High

s.69(1)(g) re: (a)
s.69(1)(g) re: (e)
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Hi all,

See attached. I'd like to ensure we do a coordinated review of the attached [redacted] for SRKW so that consolidated FM input can be provided back on this document. While the timeline for input on this isn't totally clear (Karen is checking on that), it sounds like it may be by the end of the week. What I'd suggest is people review this and I will look for a time for us to come together in the next few days and discuss consolidating our feedback.

Karen or Heather, is there any additional context for this that folks should know about? [redacted]

Thx
Neil

From: Leslie, Karen
Sent: Tuesday, July 24, 2018 7:50 AM
To: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: FW: SRKW [redacted]

Hopefully this one works

Karen Leslie
604-666-0395

From: Busby, Corina
Sent: 2018–July-24 5:22 AM
To: marc.diorio@canada.ca; michelle.sanders@tc.gc.ca; gwen.goodier@canada.ca; megan.nichols@tc.gc.ca; laura.farquharson@canada.ca; sarah.wren@canada.ca; carolyn.seburn@canada.ca
Cc: Winfield, Nicholas; Thorleifson, Erika; Stewart, Julie; Leslie, Karen; Webb, Cheryl; Thomson, Andrew
Subject: SRKW [redacted]

Hi All,

[redacted]

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Regards,
Corina

Corina Busby
Manager, Operations, Species at Risk
Fisheries and Oceans Canada / Government of Canada
200 Kent Street, 10W058
corina.busby@dfo-mpo.gc.ca / Tel: 613-218-5945

Gestionnaire des opérations, Espèces en péril
Pêches et Océans Canada / Gouvernement du Canada
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corina.busby@dfo-mpo.gc.ca / Tél. 613-218-5945

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Dozie, Juachi

From: Harber, Lee
Sent: July-25-18 8:33 AM
To: Thomson, Andrew; Davis, Neil
Subject: FW: Science deck for Monday's mtg
Attachments: SRKW Science update July 2018.pdf

Hi Andy, Neil,

A few updates:

1. Carmel sent up a shortened science updates presentation this morning. So 1 down and 3 more to go. I should have the Critical Habitat deck and TC deck by tomorrow. Then I just need to pull together the MMR deck.

2. Forward agenda discussion deck for Rebecca is under development and will be ready by Thursday as well.

3. Follow up invitation should go out today with draft Agenda, ToR, and Summary Report from June 22.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Lowe, Carmel
Sent: 2018–July-25 7:22 AM
To: Harber, Lee
Cc: Thornton, Sheila; Vagle, Svein
Subject: Science deck for Monday's mtg

Lee,
I understand that the science presentation is back on the agenda with a max time of 8-10 minutes.
Attached is the deck that Sheila and Svein prepared and is ready for distribution to participants.

I will present the deck as neither Sheila nor Svein is available.
See you Monday.

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7

Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

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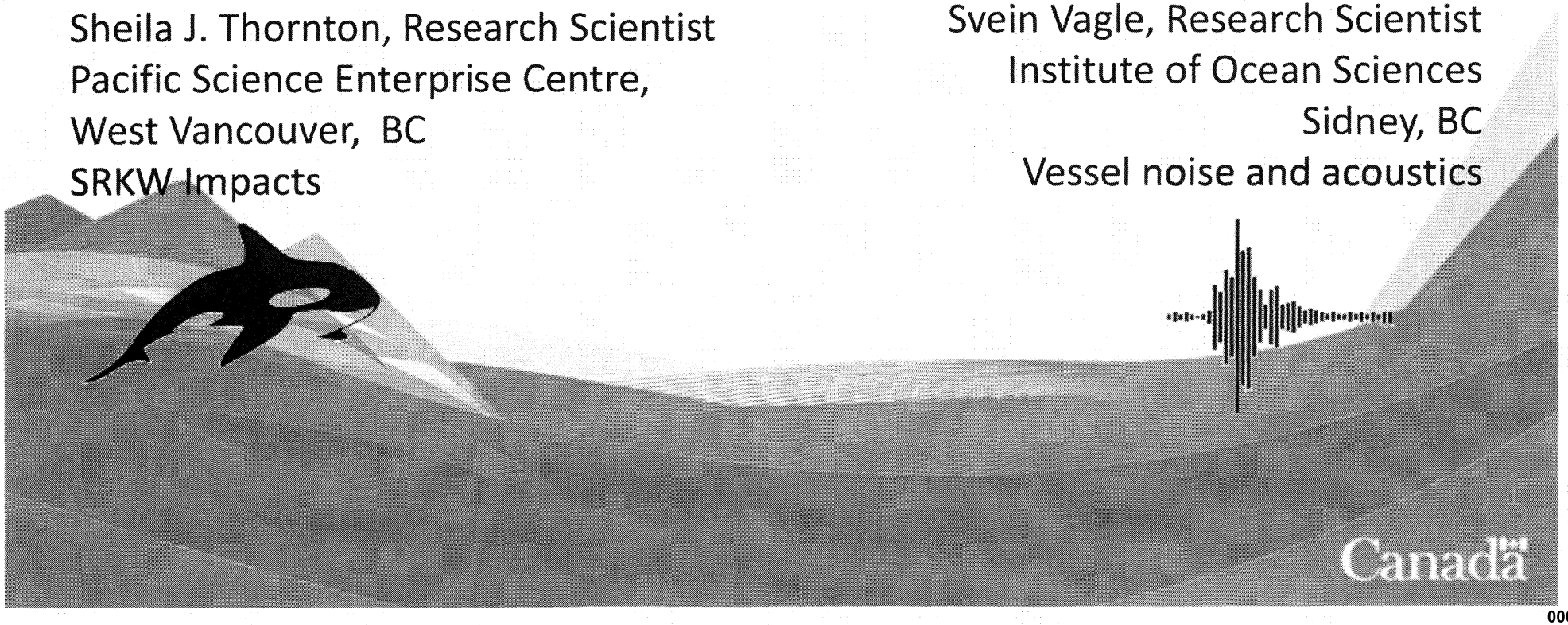
Southern Resident Killer Whale
DFO Research Update

July 2018

Sheila J. Thornton, Research Scientist
Pacific Science Enterprise Centre,
West Vancouver, BC
SRKW Impacts

Svein Vagle, Research Scientist
Institute of Ocean Sciences
Sidney, BC
Vessel noise and acoustics



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OPP Science – inform vessel impacts / mitigation decisions

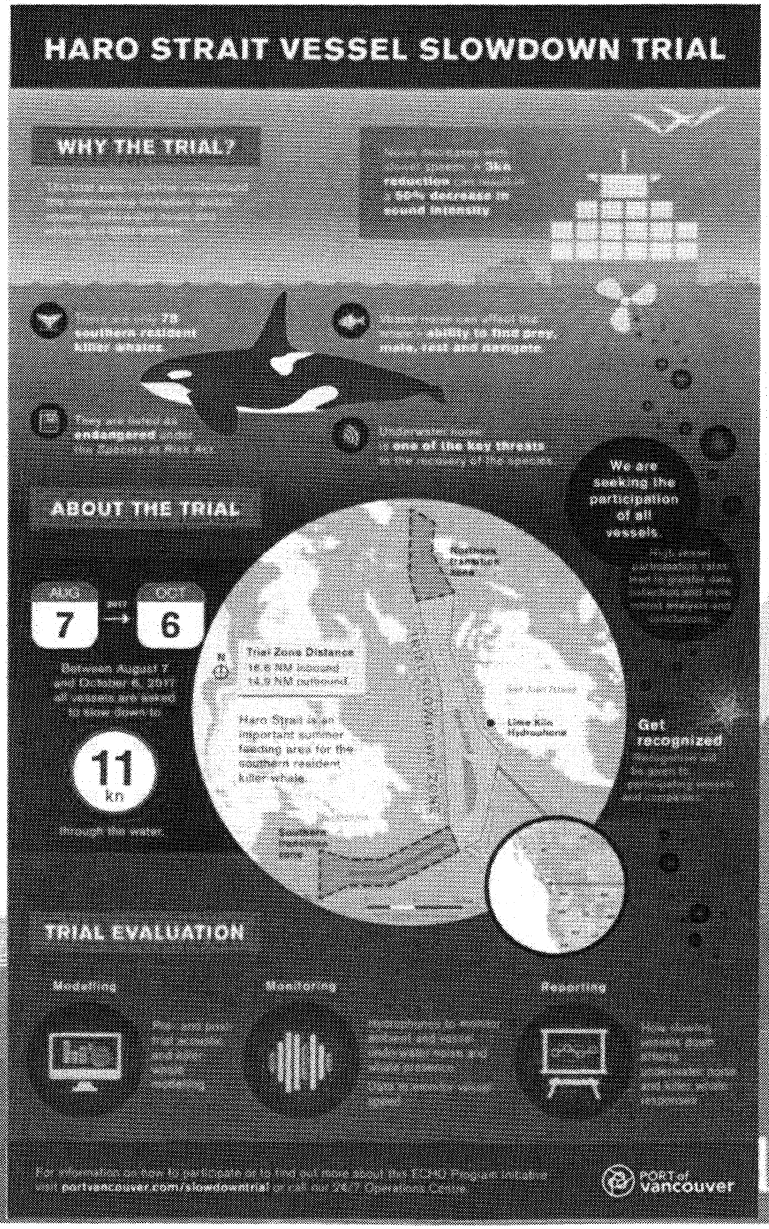
Acoustic Options to No Net Noise

Slow down = decreased SPL *vs* increased exposure

Acoustic "reserves"; restricted use (fisheries mgmt, TC, Parks)

Value of periods of quiescence?

Foraging impacts - day *vs* night passage



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Oceans Protection Plan
Marine Environmental Quality (MEQ) - Whales

SUMMER 2018 fieldwork and beyond:

- **Acoustic Baseline** - deployment of autonomous recorders in SRKW habitat
- **Behavioural Baseline** - animal activity budget/behaviour in areas affected by shipping lane
- **DTAG** - Day/Night activity and Northern/Southern comparative analysis
- **Acoustic Reserves** – Robson Bight Michael Bigg Ecological Reserve study

WINTER 2018 onwards:

- **Physiology** – fecal, genetic, metabolic assessment – health, condition, stress
- **Masking** – transmit/receive SRKW playback in the presence and absence of masking (depth sounders, sonar, etc)
- **Received Sound studies**– development and testing of acoustic drone
- **Contaminant Studies** – monitoring of contaminants in whales (SRKW and SLEB) and their main prey

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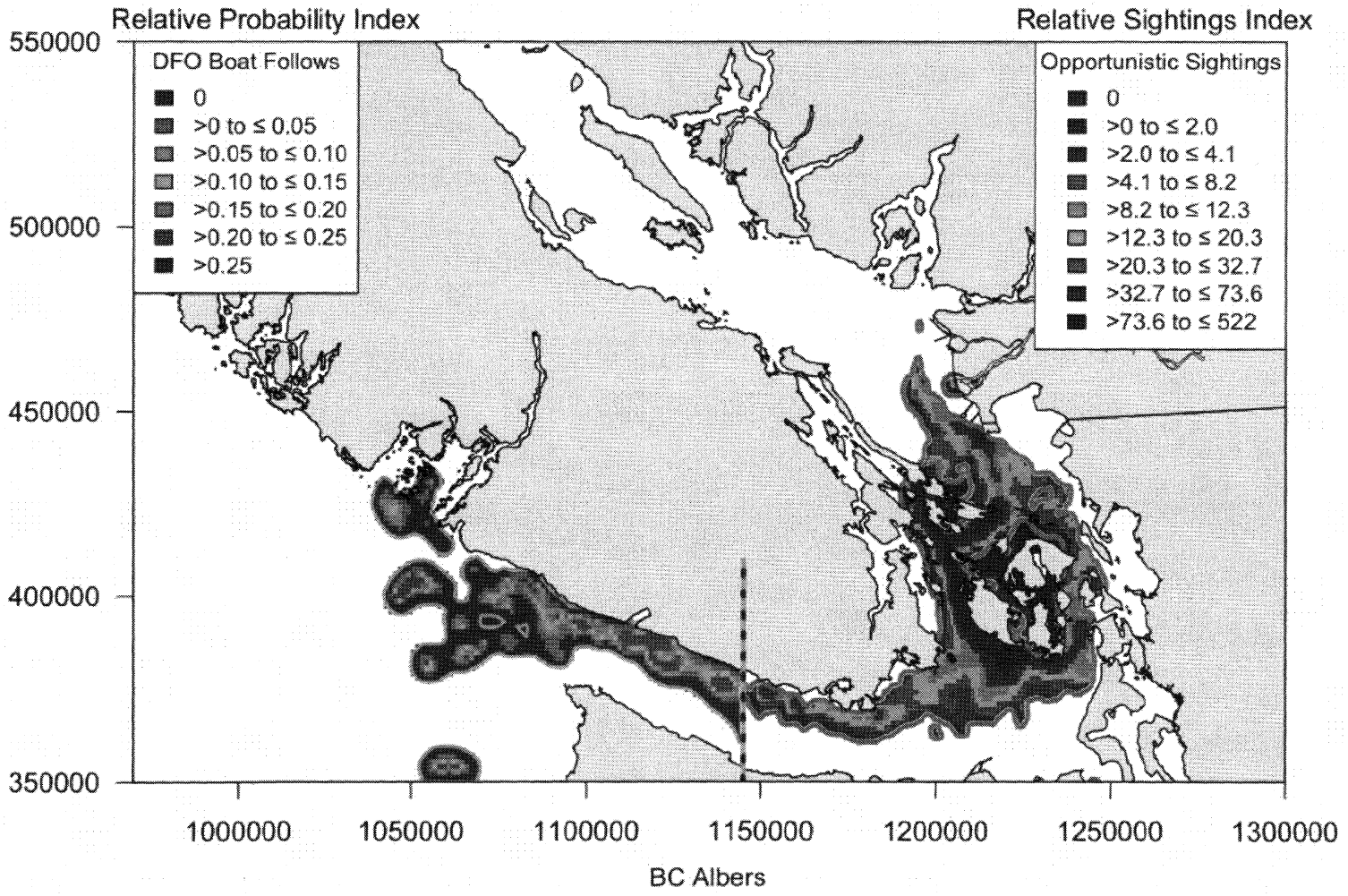
Acoustic Baseline
Identify Areas of Habitat Use - SRKW



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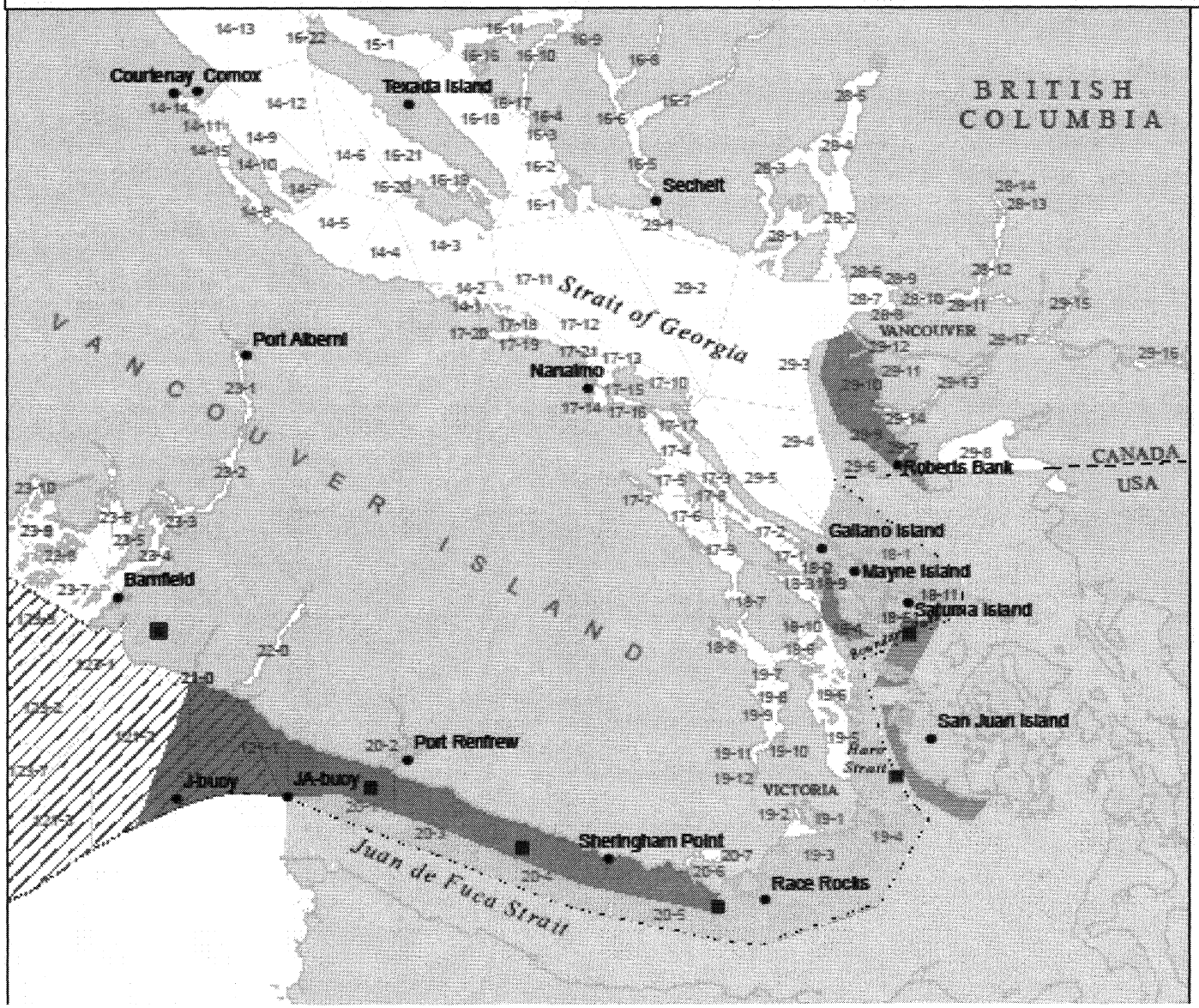
Acoustic Baseline – recorder deployment in SRKW habitat in proximity to shipping lanes



LEGEND

- SRKW foraging areas
- PFMA Subareas [1]

Acoustic Recorder Deployments

- OPP AMAR-3 – 2018

Critical Habitat

- SRKW - legal (CAN)
- SRKW - legal (USA)
- SRKW - proposed (CAN)

[1] Subareas as described in the Pacific Fishery Management Area (PFMA) Regulations, 2007.

N W E S

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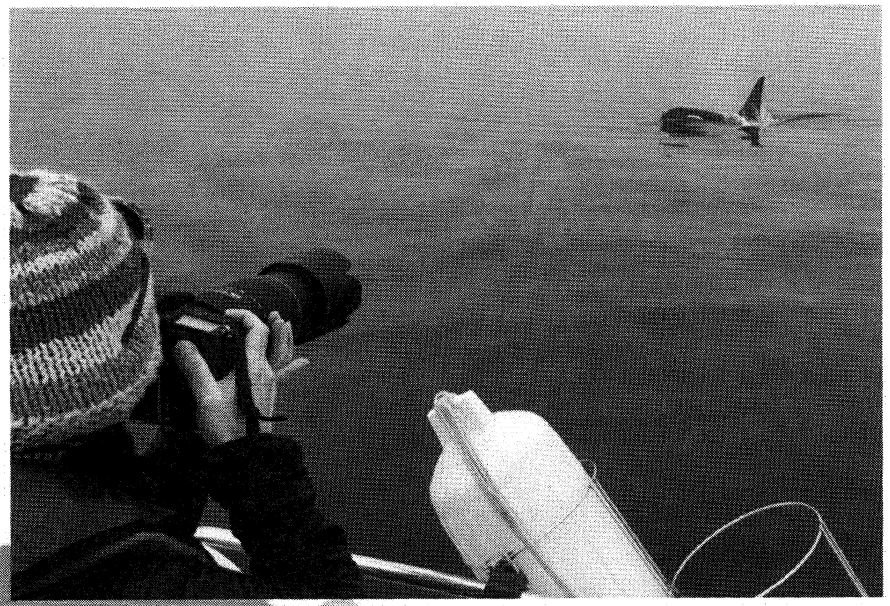
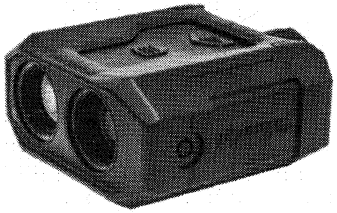
SRKW Behavioural Baseline - Study Protocols

FOCAL FOLLOW protocol



Vessel distance from whales using AIS data and laser rangefinder



Acoustic environment (ambient and vessel noise)

Environmental conditions (sea state, tide, bathymetry, etc)

- Photo-ID animals; select candidate
- Parallel individual @ ~ 100 m
- Record behavioural state every 5 minutes (feeding, foraging, resting, traveling, socializing) for up to one hour; identify foraging success and sharing behaviour
- Collect prey/fecal samples as opportunity arises
- Activity states are compared and contrasted in the presence and absence of covariates

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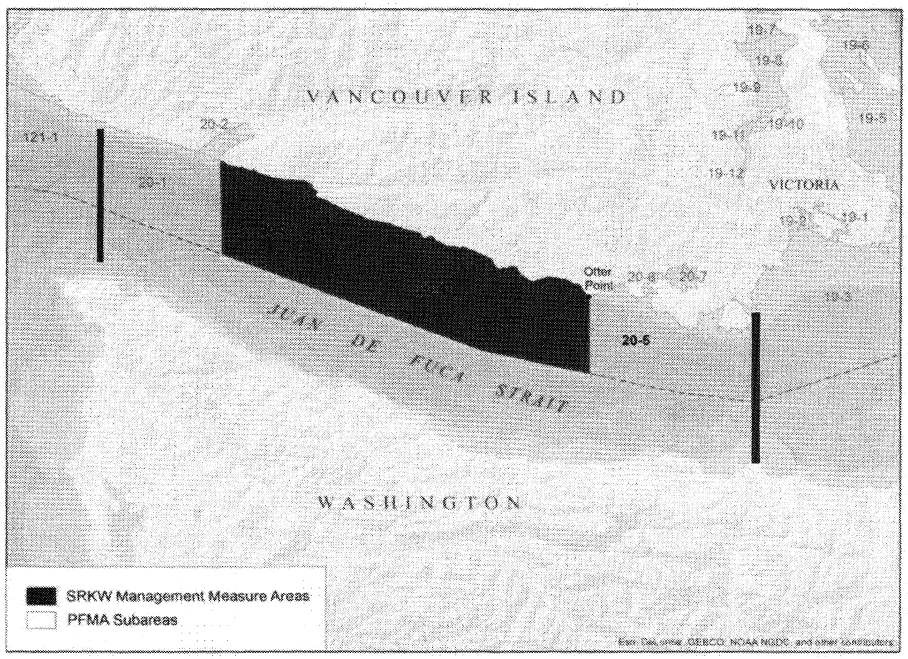
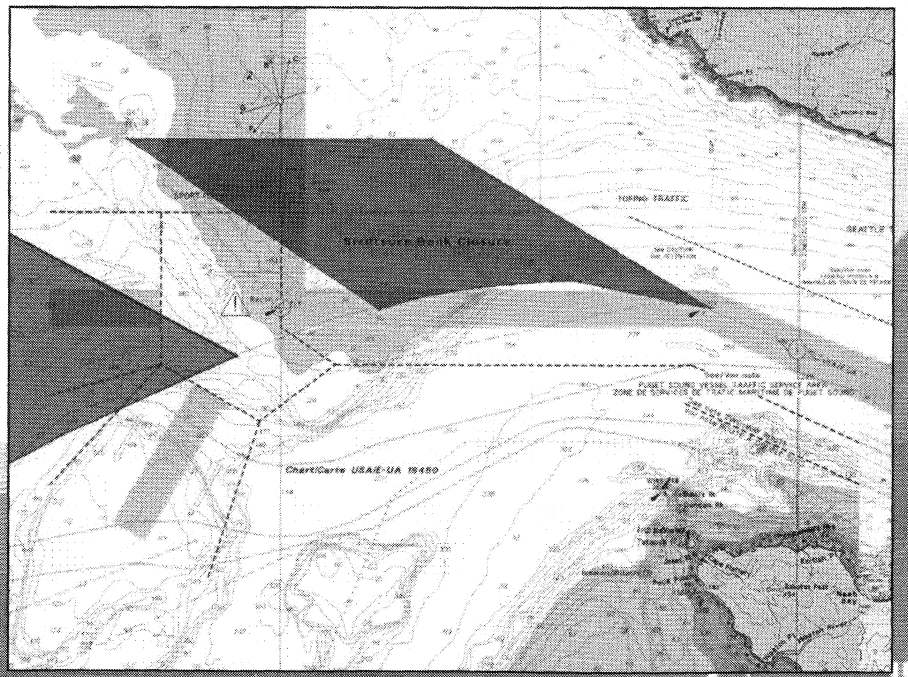
Behavioural Baseline - Juan de Fuca and Swiftsure Study Areas

Juan de Fuca Study Area



Additional Covariate: Fishery Management Area closures in Area 20-3, 20-4, and 20-5

Swiftsure Study Area



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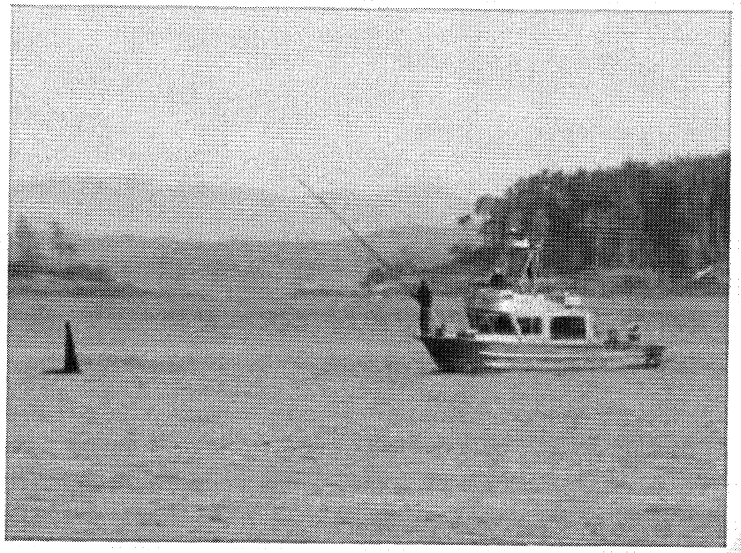
Digital Acoustic Tags (DTAGs*)

Develop a better understanding of foraging behaviour at night *vs* day and between NRKW and SRKW to answer the following queries:

- **Does the spectral frequency of echolocation vary with the acoustic environment?**
- **Does foraging effort change during the night when compared to day?**
- **Does foraging effort change with the acoustic environment?**
- **Does catch per unit effort change from day to night? In the presence of noise *vs* absence?**



DFO – NRKW in Johnstone Strait (August)
NOAA – SRKW in Salish Sea (September)

*Non-invasive suction cup tag deployed for up to 12 hours

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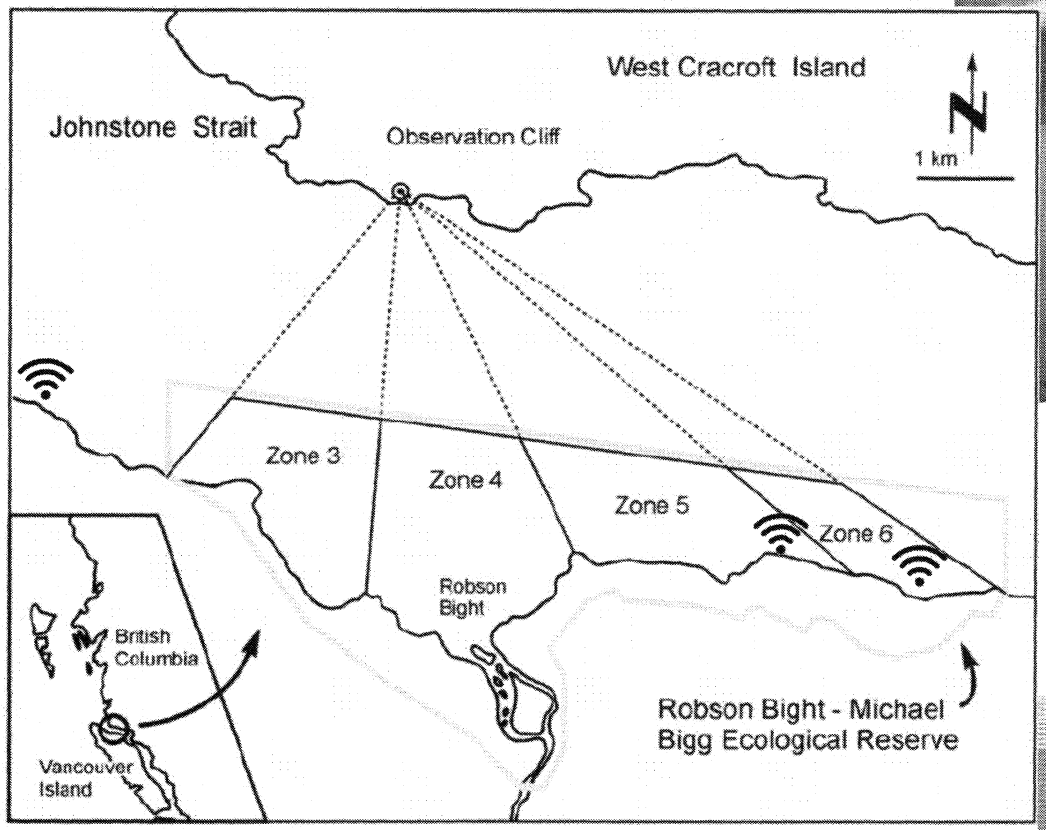
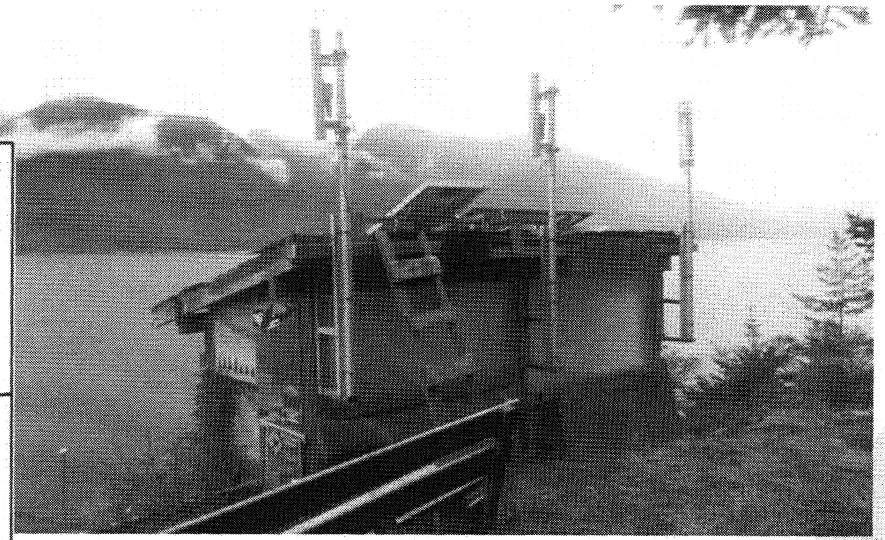
Acoustic Reserves – Robson Bight Michael Bigg Ecological Reserve

NRKW rubbing behaviour is sensitive to acoustic and physical disturbance



Antenna on Eagle Eye Observation Cliff



To evaluate the benefit of RBMBER in protecting NRKW from disturbance, three acoustic recorders were deployed on rubbing beaches inside and outside the reserve to assess rubbing behaviour (frequency and duration) with vessel distance and acoustic environment.

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Resident Killer Whale – masking

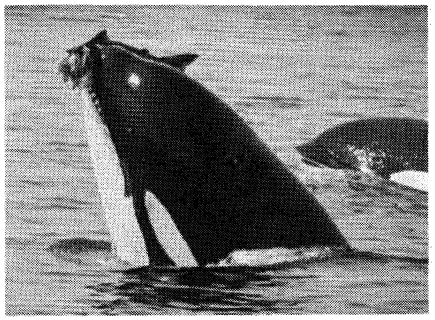
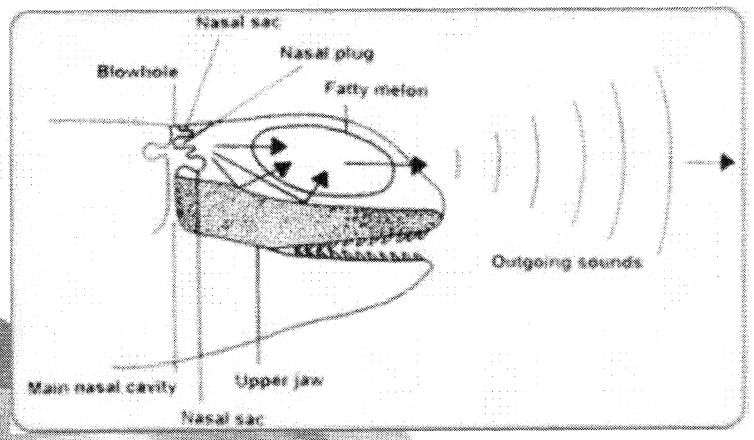
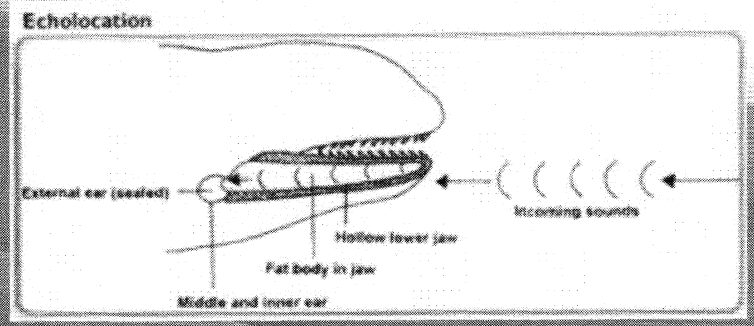


Photo: Center for Whale Research

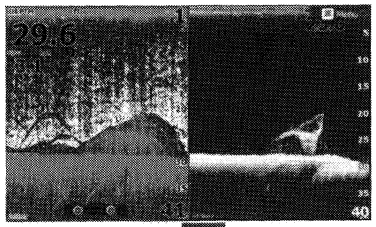
Using SRKW call and echolocation click train playbacks and a receiver, assess sound transmission in the presence and absence of masking (e.g. depth sounders, sonar, etc).

TRANSMIT SRKW RECORDINGS

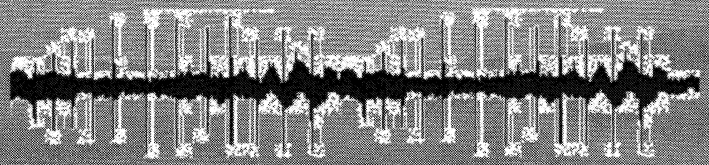




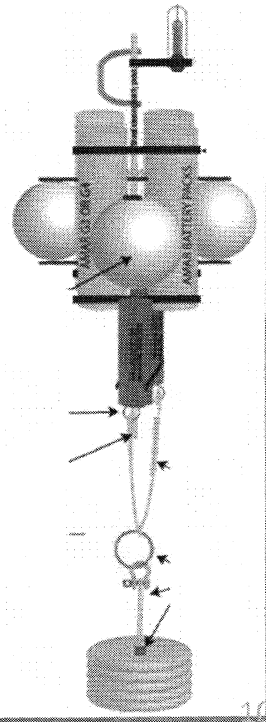
ACTIVATE MASKING



Assess sound transmission of playback calls and echolocation click trains in the presence of sonar



RECEIVER



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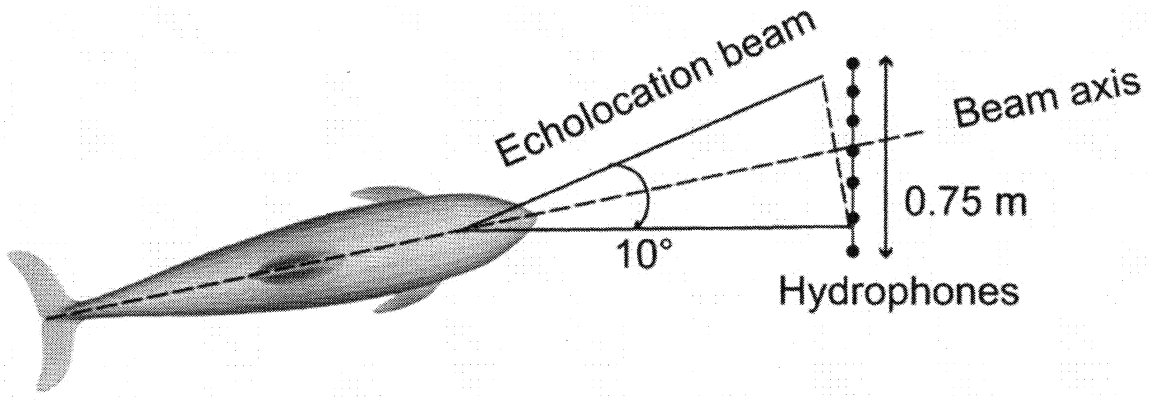
Received Sound studies – Unmanned Aerial Vehicles (UAVs or drones)

Development of drone-based acoustic recorders to assess echolocation use/foraging effort and test with DTag deployment.



turbulent research

AeroVision CANADA

Canada

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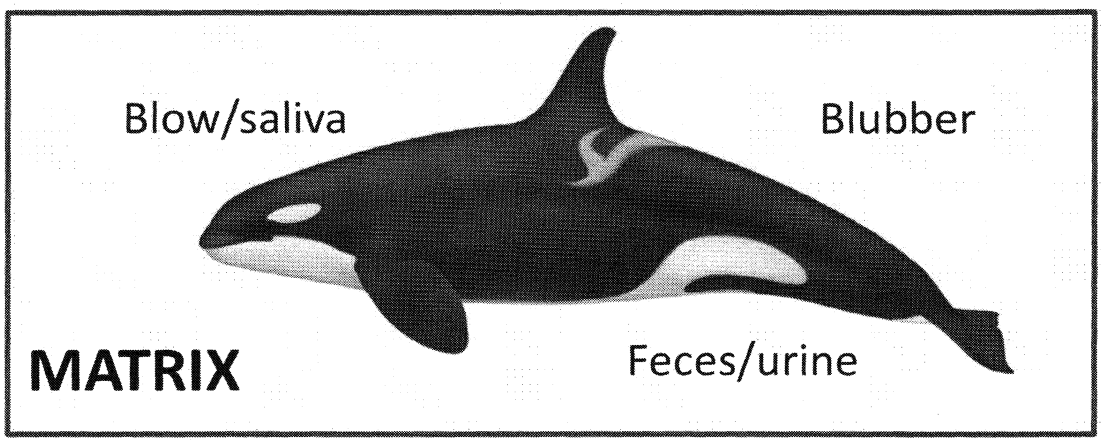
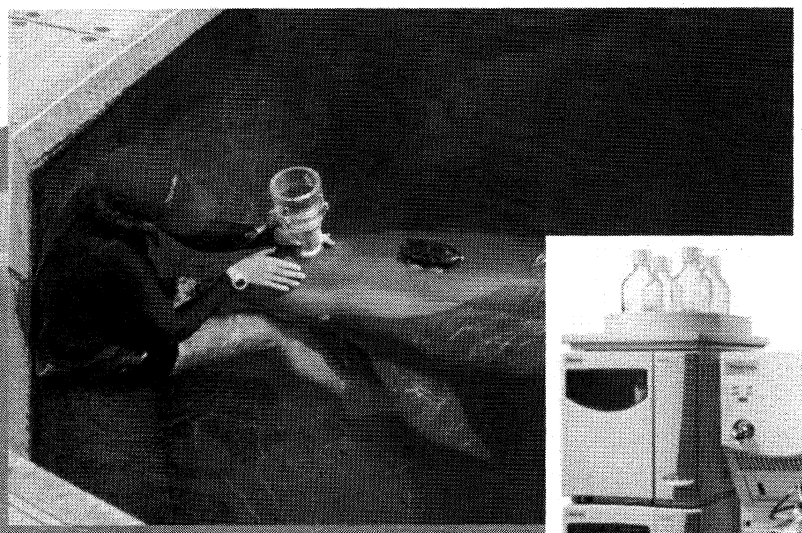
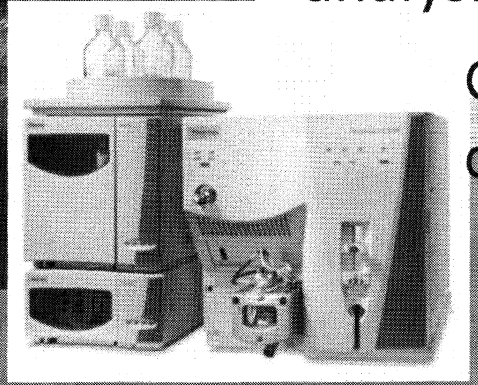
Physiological Impacts of Disturbance

Quantifying impacts to SRKW involves understanding the physiology of SRKW. Development and validation of low/non-invasive methodologies is key.







Metabolic/hormone assessment lab – metabolomics

Exhaled breath condensate (EBC) analysis

Ground-truth field sampling with captive animal studies

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Contaminants

- Contaminants of concern include pesticides, flame retardants, pharmaceuticals and personal care products.
- Focus on quantifying levels of key contaminants to document changes in contaminant loading over time
- Work will support measuring the effectiveness in control measures, and support the identification of new priority management measures
- Centralized node of Expertise at Institute of Ocean Sciences to undertake studies complimentary to those of other research organizations (CORI, NCAG, NOAA, etc).
- Proposed work by DFO will complement science activities by ECCC which will look at sources of contaminants, air/freshwater/saltwater sampling, and pathway to whale preys.

Canada

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Dozie, Juachi

From: Harber, Lee
Sent: July-25-18 4:08 PM
To: Davis, Neil; Thomson, Andrew
Cc: Barton, Meagan
Subject: Package of materials: SRKW Advisory Group
Attachments: Follow up invitation - July 30 - SRKW Advisory Group from Regional Director General.docx; Draft Agenda for July 30 mtgV6.docx; SRKW Indigenous and Multi-stakeholder Advisory Group DRAFT TOR V8.docx; SRKW Technical Briefing and Roundtable - Summary ReportV6.docx; participant list - July 30.docx

Hi Andy / Neil,

I am working with Meagan and RDG's office to prepare an email with materials to participants. We will not press send until you guys and RDG have given signal. Also, we might need to wait on any outcomes from DM mtg on Friday. (?)

Attached materials for distribution to participants includes:

1) Invite cover email
2) Draft Agenda
3) Draft ToR
4) Summary Report
5) Participant list emails

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

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Fisheries and Oceans Canada

Pêches et Océans Canada

s.16(2)

s.19(1)

Regional Director General
Pacific Region
Suite 200 – 401 Burrard Street
Vancouver, British Columbia
V6C 3S4

Directrice générale régionale
Région du Pacifique
Piéce 200 – 401 rue Burrard
Vancouver C.-B.
V6C 3S4

Your file *Votre reference*
Our file *Notre reference*

2018-501-00069

[redacted]
Researcher, University of British Columbia
[redacted]

Dear [redacted]

On behalf of Fisheries and Oceans Canada (DFO), Transport Canada (TC), and Environment and Climate Change Canada (ECCC), I would like to thank you for your interest in participating in our upcoming Southern Resident Killer Whale (SRKW) Indigenous and Multi-Stakeholder Advisory Group meeting on July 30, 2018.

This meeting will be an opportunity to formally establish the Advisory Group, provide updates on current recovery measures underway, and collectively discuss a forward agenda for future meetings.

At this time, I would also like to invite you to propose any updates that you would like to present at the meeting and we will add this to the agenda. Please submit any items that you wish to provide an update on by Friday July 27 to Lee.Harber@dfo-mpo.gc.ca.

Meeting date, time, and location
The meeting will take plan on Monday, July 30, from 9:30am to 12:30pm at 401 Burrard Street, Vancouver, BC, 2nd floor, Boardroom 2C and 2D.

Please note that the meeting has been extended from 2 to 3 hours in duration.

If you are unable to attend in person, a teleconference option is available:

Telephone Number: 1-877-413-4790
Conference ID: [redacted]

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Meeting Overview:

The meeting will begin with introductions and a review of the meeting agenda and the ratification of the summary report from the June 22nd technical briefing and roundtable discussion. Federal officials will then provide update on a few of the recovery measures that are currently being implemented. Next we will review the draft Terms of Reference for the Advisory Group and also have a discussion on a proposed forward agenda.

Please find attached a detailed meeting agenda that provides additional details on the structure of the meeting.

We continue to seek your input and experience in designing a process that will serve as an effective and efficient forum for communication and collaboration.

I look forward to working with you.

Sincerely,

Rebecca Reid
Regional Director General
Pacific Region

cc: M. Sanders, Transport Canada
M. Nichols, Transport Canada
M. D'Iorio, Environment and Climate Change Canada
C. Wong, Environment and Climate Change Canada

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Southern Resident Killer Whale: Indigenous and Multi-Stakeholder Advisory Group – Participant List

Sector	Name	Position	Affiliation	E-mail
Indigenous representatives	Teresa Ryan	Researcher	UBC	[redacted]
	[redacted]	[redacted]	First Nations Summit	[redacted]
	[redacted]	[redacted]	FNFC	[redacted]
	[redacted]	[redacted]	FNFC	[redacted]
	[redacted]	[redacted]	FNFC	[redacted]
NGOs	[redacted]	[redacted]	Raincoast Conservation Foundation	[redacted]
	[redacted]	[redacted]	Georgia Strait Alliance	[redacted]
	[redacted]	[redacted]	WWF Canada	[redacted]
	[redacted]	[redacted]	David Suzuki Foundation	[redacted]
	[redacted]	[redacted]	Natural Resources Defence Council	[redacted]
	[redacted]	[redacted]	Vancouver Aquarium [Oceans Wise / CORI Team]	[redacted]
Shipping Industry	[redacted]	[redacted]	Port of Vancouver	[redacted]
	[redacted]	[redacted]	Shipping Federation of Canada	[redacted]
	[redacted]	[redacted]	Chamber of Shipping	[redacted]
	[redacted]	[redacted]	Canadian Ferry Association	[redacted]
Fishing Industry	[redacted]	[redacted]	Sport Fishing Advisory Board	[redacted]
	[redacted]	[redacted]	BC Seafood Alliance	[redacted]
Whale Watching	[redacted]	[redacted]	Pacific Whale Watching Association	[redacted]
Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca

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Southern Resident Killer Whale: Indigenous and Multi-Stakeholder Advisory Group – Participant List

	Jennifer McGuire (alternate)	Assistant Deputy Minister	Environmental Sustainability Division	Jennifer.McGuire@gov.bc.ca
Municipal Government			Metro Vancouver Regional District	
Federal government	Rebecca Reid	Regional Director General, Pacific Region	Fisheries and Oceans Canada	Rebecca.Reid@dfo-mpo.gc.ca
Federal government	Carmel Lowe	Regional Director, Science, Pacific Region Science	Fisheries and Oceans Canada	Carmel.Lowe@dfo-mpo.gc.ca
Federal government	Andy Thomson	Regional Director, Fisheries Management	Fisheries and Oceans Canada	Andrew.Thomson@dfo-mpo.gc.ca
Federal government	Sylvie Lapointe	ADM, Fisheries and Harbours Management	Fisheries and Oceans Canada	Sylvie.Lapointe@dfo-mpo.gc.ca
Federal government	Michelle Sanders	Director, Clean Water Policy	Transport Canada	Michelle.Sanders@tc.gc.ca
Federal government	Megan Nichols	Director General, Environmental Policy	Transport Canada	Megan.Nichols@tc.gc.ca
Federal government	Yvette Myers	Executive Director, Oceans Protection Plan	Transport Canada	Yvette.Myers@tc.gc.ca
Federal government	Marc D'Iorio	Director General, Industrial Sectors, Chemicals, and Waste Directorate	Environment and Climate Change Canada	Marc.diorio@canada.ca
Federal Government	Cecilia Wong	Senior Ecosystem Scientist	Environment and Climate Change Canada	cecilia.wong@canada.ca
Federal Government	Helen Davies	Field Unit Superintendent Coastal BC	Parks Canada	Helen.Davies@pc.gc.ca

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TECHNICAL BRIEFING AND ROUNDTABLE ON SOUTHERN RESIDENT KILLER WHALE RECOVERY
JUNE 22, 2018
VANCOUVER, BRITISH COLUMBIA

SUMMARY: WHAT WE HEARD

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2. Management Approach 4
3. Monitoring and Enforcement 5
4. Indigenous Rights and Access 5
5. Federal and Provincial Collaboration 5
6. Threat Abatement for SRKW 5

Key Messages, Next Steps & Actions Committed 6

Key Messages 6

Next Steps & Actions Committed 7

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Annex B: Participant List 9

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Meeting Objectives

- Provide an overview of the management efforts undertaken over the last several years.
- Review new measures in today's announcements, under the Whales Initiative.
- Engage in a roundtable discussion on the way forward, including a proposal for an Indigenous and multi-stakeholder advisory committee.

Opening Remarks:

Deputy Ministers:

- Acknowledged the importance of the protection and recovery of the Southern Resident killer whale (SRKW), the significant efforts that have been undertaken to date, including the Science Based review of threats to SRKW and the Symposium to convene diverse interests toward SRKW recovery, and the new measures that have been announced under the Whales Initiative.
- Emphasized that measures will need to go beyond immediate actions being announced but as an ongoing process of continually strengthening measures as more information and science becomes available.
- Working together with First Nations and stakeholders, including NGOs and industry to maximize the effectiveness of recovery measures being implemented.

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Roundtable: Key Themes from invited participants

1. Establishing a Forum for Engagement

- Overall recognition that the Southern Resident Killer Whale (SRKW) population is facing imminent threats to its survival and recovery and that protection and recovery actions will benefit from collaboration between agencies and multiple interests including Indigenous, NGO and industry interests.
- Strong endorsement for a SRKW Indigenous and multi-stakeholder advisory committee.
- This committee could facilitate valuable engagement with many groups – amongst each other and with the relevant federal departments.
- Effective plans to support SRKW recovery should include:
    - Clear objectives and goals as they relate to the needs of the SRKW;
    - Targeted levels of reduction among threats to recovering viable populations of SRKW
    - Immediate actions on threats that are well understood.
- Adaptive management and longer term research on threats that are less understood
- Effective requirements of an Advisory Committee should include:
    - Terms of Reference;
    - Clear direction on who and how actions will be achieved;
    - Trust built and established in a short time with members open about own information and goals;
    - Decision-makers who can effect change to be present on a regular basis at meetings.

2. Management Approach

The management approach for SRKW recovery and protection needs to consider:

Short term vs. Long-term Measures

- Identify and implement short term/immediate actions
- Adaptive management (i.e., measures continually improved through science and knowledge) supports good policy development
- Adaptive management is a process that takes time and cannot be relied upon to produce immediate actions or measures (i.e., the associated timeline is too long to address recovery for the SRKW population)
- The federal government needs to provide direction on how to implement a requirement/action not just continue to seek justification or additional evidence regarding the effectiveness of recovery measures.

Voluntary vs. Regulatory Measures

- Consider effectiveness and appropriateness of voluntary and/or regulatory actions;
- Voluntary cooperation on recovery measures that are mutually agreed upon may be implemented immediately or in the near-term. With cooperative monitoring and data sharing on the effectiveness of measures, voluntary actions may lend well to adaptive management including course correction if appropriate.

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- Regulations take time to develop however may be more broadly applied with compliance promotion and enforcement, and would provide greater certainly among interests about recovery measures. With broader implementation, there would be improved data to inform adaptive management decisions

Targets and Measurable Results

- To be successful, identified measures/activities to reduce threats to SRKW viability must have: a) alignment with objectives for recovering SRKW population, b) clear reduction targets that reflect SRKW needs and interactions among threats, and c) performance measures to indicate the effectiveness of measures.

- To inform adaptive action, identification of research needs and provision of science advice needs to be timely. It is important to think about the measures in place and how to measure the effects of these protections.

3. Monitoring and Enforcement

- There is general concern for how monitoring and enforcement will be implemented and made effective for SRKW recovery and protection. Clarification of how the new regulations will be enforced is also needed.
- Whale detection in real time is an important tool.

4. Indigenous Rights and Access

- Fisheries management decisions and SRKW recovery measures can have impacts on First Nations' ways of life, including fisheries for food, social and ceremonial purposes, and this should be carefully considered and respected so that access and rights are preserved.
- Long term planning is important, but to get buy in and support, short term recovery measures are necessary. To build the relationships with First Nations these short term measures need to be appropriate and meaningful.

5. Federal and Provincial Collaboration

- Federal and Provincial governments need to work together to coordinate respective recovery actions especially as it pertains to habitat protection and restoration for Chinook and Coho Salmon (e.g., water quality for juvenile salmon in river and out to sea; effects of logging and fire management)

6. Threat Abatement for SRKW

Actions to abate the threat of reduced prey availability need to:

- Be broad and consider all components, including harvest (e.g., at sea and in tidal waters), hatchery production, and habitat (e.g., juvenile Chinook and Coho Salmon survival related to water quality and habitat from freshwater to sea, spawning success including clear access to spawning grounds – protection and restoration)
- Consider existing initiatives around salmon survival and conservation (e.g., Wild Salmon Policy, efforts under the Oceans Protection Plan) and identify where efforts may be aligned.

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- Need to consider the Chinook Salmon take from Alaska and discuss reductions on Alaska's catch to achieve greater escapement in Canada and more Chinook Salmon for SRKW.

Actions to abate other threats (vessel strike and disturbance):

- Vessel strikes should be considered as one of the threats to SRKW.
- Further development, investment and application of whale detection in real time is needed to help abate threats to SRKW (e.g., vessel strikes, acoustic/physical disturbance); clear goals and timeline are needed.

Actions to abate the threat of environmental contaminants:

- Sources and sinks of contaminants will be an important focus going forward, particularly in urban areas to understand impacts to SRKW habitat, prey availability, and toxics in prey.
- Sampling in the Fraser and other rivers will be a method of determining if there are adverse impacts to habitat and prey from waste water and runoff to the system; examining leachate from land fill areas will help determine if this is a source of contamination.
- The Disposal at Sea regulations under Canadian Environmental Protection Act serve as protective controls that are currently in place but it will be important to look at these closely to see if there are areas for improvement e.g. monitoring sites more closely to establish more protective limits and to ensure contaminants such as PBDEs are not increasing.
- Under the Chemicals Management Plan, contaminants known or suspected to be affecting whales, such as flame retardants (e.g. PBDEs), existing controls will be evaluated and strengthened

Key Messages, Next Steps & Actions Committed

Key Messages

- Overall strong support received from participants for the establishment of an Indigenous and multi-stakeholder advisory committee
- Ensure preservation of Indigenous economic benefits, Indigenous rights and cultural practices.
- The Advisory Group must have a clear, well defined role.
- Short and long term goals are needed, but short term action must be a priority for immediate threat abatement.
- Need to identify what additional short term actions are required and who needs to be involved in implementing them.
- Identify when and where voluntary and/or regulatory measures are most effective.
- Decision makers need to attend meetings; be willing to listen.
- Science needs must be identified to ensure research is appropriately addressing questions within timelines for SRKW recovery.
- Enforcement activity related to management measures and new regulations needs to be clarified and clearly communicated.

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Next Steps & Actions Committed

- Based on input from participants during the roundtable discussion, a draft Terms of Reference will be developed and shared for input prior to the next meeting.
- A follow-up meeting with all participants will take place in 4-6 weeks' time to discuss:
    - draft Terms of Reference;
    - group membership, roles and responsibilities;
    - meeting frequency;
    - Milestones and deliverables;
    - Recent developments / progress on SRKW measures.
    - need for technical sub-committees / working groups to inform/support the advisory committee
        - identify existing SRKW-related initiatives that may align and provide support to the committee
- A summary of what was heard at this meeting will be provided to all participants.

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Annex A: Questions and Responses

1. **How will the new requirements under the Marine Mammal Regulations be enforced?**
    - **How will enforcement differ between whales and pinnipeds?**
    - **How will aerial surveillance be able to differentiate between a vessel approaching an SRKW or the other way around?**
    - **Can different regulation apply for Transient Killer Whales to Resident Killer Whales in context of whale watching?**

The amendments to the *Marine Mammal Regulations* include expanding the scope of application of the Regulations to include conservation and protection of marine mammals in Canada and Canadian fisheries waters. These amendments introduce a general minimum approach distance of 100 m for whales, dolphins and porpoises and provide an alternative approach distance tailored to particular circumstances, including a minimum approach distance of 200 m for all Killer Whale populations in B.C. and the Pacific Ocean.

Anyone who contravenes the Regulations may be charged with an offence under the *Fisheries Act* and, if convicted, may be subject to punishment of a fine up to $100,000 on summary conviction, or $500,000 if the Crown proceeds by indictment, or, for a subsequent offence, a higher fine or imprisonment.

To support the Whales Initiative, aerial surveillance for SRKW is being enhanced by shifting efforts of Fisheries Aerial Surveillance patrols over their critical habitat to verify compliance with distance and disturbance provisions of the updated regulations and enforce fisheries closures. The increased aerial surveillance will complement ongoing vessel enforcement patrols that will also monitor closed areas. The fishery officers on the aircraft will be able to determine the distance between the vessels and SRKW using the surveillance equipment on the aircraft. This information will be available to local enforcement personnel should it be needed for further action.

SRKW are physically similar to other types of KW, as such they are difficult to tell apart. To ensure the best protection for SRKW, approach distances under the MMRs have been made to apply all KWs.

2. **In aerial surveillance programs, how far out to sea will they go to capture illegal high seas fishing? What arrangements with other countries are in place for aerial surveillance?**

Canada does not currently have agreements in place with other countries (including the U.S.) for aerial surveillance.

3. **Need a multipronged approach that explores impacts resulting from the Alaska fishery. What is status of negotiation for reducing Alaska fishery to increase prey availability in Canadian waters?**

Canadian and U.S. representatives on the Pacific Salmon Commission (PSC) recently concluded the renegotiation of five chapters of the Pacific Salmon Treaty, including Chapter 3 (Chinook). If approved by both countries, the new chapters would be in place for 10 years, beginning January 1, 2019 (through 2028). Negotiations within the PSC considered the important ecosystem role played by Pacific salmon, particularly Chinook. The PSC has recommended a number of changes to the Chinook chapter, including harvest reductions in Canadian and U.S. (Alaskan) fisheries to address conservation concerns for Chinook stocks in both countries. The proposed changes include up to a 7.5% reduction in harvest for

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the U.S. Southeast Alaska (SEAK) Chinook fishery, which will support conservation and rebuilding of Canadian and U.S.-origin Chinook and may also improve Chinook availability for SRKW.

Under the revised Chapter, Canada would also reduce Chinook harvest in the West Coast of Vancouver Island (WCVI) fishery and in some of the inside (Individual Stock Based Management or ISBM) fisheries. These reductions would align with domestic conservation measures for Chinook identified in the 2018/19 Pacific Salmon IFMP and support increased prey availability, as well as reduce vessel-related disturbance for SRKW in Canadian waters.

4. How will issues of prey (Chinook and Chum) availability and health be addressed with province of BC? Is there an MOU currently in place?

There is currently no MOU in place between Province of B.C. and DFO. However, the Province is part of the Species at Risk Coordinating Committee (SARCC) and the Species at Risk Steering Committee, which are two committees established by the Canada-British Columbia Agreement on Species at Risk (April 2005). The purpose of this Agreement is to ensure a coordinated and focused approach to the delivery of species at risk protection and recovery in BC. It does so by: setting out the respective roles and responsibilities of Canada and British Columbia (the Parties) with respect to species at risk protection and recovery in British Columbia; establishing the coordinating mechanisms needed to consult on key decisions, establish joint priorities, share information and design coordinated programs of work; and, providing opportunities to jointly develop species at risk policies where appropriate. Through these committees the Province is engaged with the federal government on species at risk.

5. What efforts are being made to increase Chinook salmon abundance?

DFO has a Chinook production program encompassing most of the Canadian coast delivered through the Salmonid Enhancement Program (SEP). Current hatchery production directly supports fisheries, provides key assessment information used to manage Chinook stocks, and fulfils key international obligations for Canada under the Pacific Salmon Treaty. DFO-SEP currently produces Chinook salmon at 16 DFO operated facilities, 11 contract facilities, and on a smaller scale by some of its partners at 25 Public Involvement Program facilities. Target Chinook releases from these facilities is approximately 40 million juvenile fish per year. This includes 36 million juveniles produced in southern BC.

6. Regarding recreational finfish closures in Gulf Islands, are there any plans for direct observation to determine if the closure contributes to any change for SRKW success in the area?

There are a variety of sources of information that may be useful for helping to assess the effectiveness of management measures. Potential performance metrics could include SRKW body condition, use and foraging success for SRKW, acoustic monitoring and available assessment information for Chinook salmon. Ongoing and future research through DFO Science and others (e.g. NOAA) could provide pieces of information that could be reviewed to inform effectiveness of management action. This information will likely require a lengthier time period to assess the effect of any one specific action while also recognizing that any cause and effect relationship will be challenging to demonstrate. Aerial surveillance and on-water enforcement, along with documentation of SRKW occurrence in this area will occur.

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In general, monitoring of effectiveness of management actions taken to abate threats to SRKW recovery is complex and challenging. Identification of performance metrics to evaluate effectiveness of any potential management measures taken requires both science and management input to understand what is possible and how it may be measured, including when it may not be feasible.

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Annex B: Participant List

Sector	Name	Position	Affiliation	E-mail	Present
Indigenous representatives			UBC		X
			First Nations Summit		X
			FNFC		X
			FNFC		X
			FNFC		X
NGOs			Raincoast Conservation Foundation		X
			Georgia Strait Alliance		X
			WWF Canada		X
			David Suzuki Foundation		X
			Natural Resources Defence Council		X
			Vancouver Aquarium [Oceans Wise / CORI Team]		X
			Oceanwise		X
Shipping Industry			Port of Vancouver		Did not attend
			Port of Vancouver		X
			Shipping Federation of Canada		X
			Chamber of Shipping		X
			Canadian Ferry Association		X
			BC Ferries		X
			Sport Fishing		X

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	[redacted]		Advisory Board	[redacted]	
			BC Seafood Alliance		X
Whale Watching			Pacific Whale Watching Association		X
			Eagle Wing Tours (PWWA VP)		Phone
			Springtide whale watching and eco tours		Phone
			Vancouver Whale Watch		phone
Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca	X
Municipal Government	*No attendee*	-	City of Vancouver	-	?
Federal government	Rebecca Reid	Regional Director General, Pacific Region	DFO	Rebecca.Reid@dfo-mpo.gc.ca	X
Federal government	Carmel Lowe	Regional Director, Science, Pacific Region Science	DFO	Carmel.Lowe@dfo-mpo.gc.ca	X
Federal government	Andy Thomson	Regional Director, Fisheries Management	DFO	Andrew.Thomson@dfo-mpo.gc.ca	X
Federal government	Kevin Stringer	Associate Deputy Minister	DFO	Kevin.Stringer@dfo-mpo.gc.ca	X
Federal government	Sylvie Lapointe	ADM, Fisheries and Harbours Management	DFO	Sylvie.Lapointe@dfo-mpo.gc.ca	X
Federal government	Michelle Sanders	Director, Clean Water Policy	TC	Michelle.Sanders@tc.gc.ca	X
Federal government	Megan Nichols	Director General, Environmental Policy	TC	Megan.Nichols@tc.gc.ca	X
Federal government	Michael Keenan	Deputy Minister	TC	Michael.Keenan@tc.gc.ca	X
Federal government	Yvette Myers	Executive Director, Oceans Protection Plan	TC	Yvette.Myers@tc.gc.ca	X
Federal government	Marc D'Iorio	DG, Industrial Sectors, Chemicals, and Waste Directorate	ECCC	Marc.diorio@canada.ca	X
Federal Government	Cecilia Wong	Senior Ecosystem Scientist	ECCC	cecilia.wong@canada.ca	X
Federal Government	Mary-Ann Spicer	Manager, Chemicals	ECCC	mary-ann.spicer@canada.ca	Phone

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		Management Division			
Federal Government	Christopher Marshall		ECCC	christopher.marshall@canada.ca	Phone
Federal Government	Kendra Moore	Fisheries and Aquaculture Management	DFO	Kendra.moore@dfo-mpo.gc.ca	Phone
Federal Government	Robert Dick	Regional Director	TC	Robert.Dick@tc.gc.ca	X

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Southern Resident Killer Whale
Indigenous and Multi-stakeholder Advisory Group

Terms of Reference
(DRAFT)

1. BACKGROUND

As identified at the October 2017 Symposium for the Southern Resident killer whale (SRKW) and the recent *Whales Initiative* technical briefing and roundtable discussion on June 22, 2018, this Advisory Group has been established by the federal departments of Fisheries and Oceans Canada, Transport Canada, and Environment and Climate Change Canada to bring together Indigenous groups, multiple stakeholders, and implicated jurisdictions to facilitate communication and coordination of activities to recover SRKW.

This advisory group does not replace the Crown's Duty to Consult and accommodate nor does it replace the regular engagement and consultation on individual initiatives and measures related to SRKW recovery.

2. OBJECTIVES

The main objectives of the advisory group will be to:

a. Provide a forum for the participants to discuss actions underway and planned by federal departments and others to protect SRKW, and to allow participants to provide advice on recovery actions and to share information to help inform government decision-making.

b. Promote dialogue and improve shared understanding of the complexities of SRKW recovery, shared responsibilities, and respective authorities of Advisory Group participants to reduce SRKW threats.

c. Identify opportunities for collaboration and partnership that can advance the collective implementation of the recovery measures identified in the Species at Risk *Action Plan for Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada* (2017), Oceans Protection Plan (2017) the Science Based *Review of the Effectiveness of Recovery Measures for Southern Resident Killer Whales* (2017), and the measures announced under the federal *Whales Initiative* on June 22, 2018 to promote recovery of the species.

> *Discussion question: Are there specific milestones or deliverables that you would like to identify under these objectives?*

3. GOVERNANCE AND MEMBERSHIP

The Indigenous and Multi-stakeholder Advisory Group will consist of representatives from various Indigenous and stakeholder groups: indigenous communities, Non-Governmental Organizations (NGO),

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the shipping and marine transportation, fishing, and whale watching sectors, the Government of British Columbia, and Metro Vancouver Regional District.

The Advisory Group will be chaired by the Regional Director General of Fisheries and Oceans Canada (DFO), with ex-officio participation of senior officials from DFO, Transport Canada, and Environmental and Climate Change Canada.

The Advisory Group secretariat will report out on the discussions that were held and the recommendations made, noting the degree of support or divergence among members for advice on different issues.

If a member of the Advisory Group is unable to attend a meeting an alternate participant may attend on their behalf. Additional observers are welcome to listen to discussions however participation is limited to members or designated alternates.

The Advisory Group will refer to other existing technical committees and working groups as needed to address technical questions and issues. If, through discussion, a need or gap is identified, the Advisory Group may consider establishing supporting technical groups for specific purposes.

4. RESPONSIBILITIES OF PARTICIPANTS

Review circulated information.

Participate in meetings or assign alternate to attend.

Engage in open and respectful dialogue, seeking to understand and be understood.

Communicate out to their respective organizations/communities the activities and outcomes of this Advisory Group.

5. MEETING PROCESS

The Advisory Group is anticipated to meet up to 4 times per year however this may be adjusted by the chair, if needed. Teleconferencing and video conferencing will be used where possible to minimize travel demands.

Discussion question: How often should this group meet?

Federal departments will provide secretariat services to support meeting delivery and the preparation of summary meeting notes.

Advisory group participants will be invited to propose topics for future meetings. Agendas will be approved by the chair.

Discussion question: What do you feel should be a priority topic on future agendas?

6. REPORTING

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The Chair will disseminate meeting summary notes through the federal secretariat to this Advisory Group.

Individual participants of this Advisory Group will also report back to their respective organizations.

The Chair/secretariat will provide draft meeting summary notes that include a record of recommendations and follow up actions to all participants within two weeks of the meeting. The Advisory Group will have 2 weeks to review summary notes prior to their finalization.

7. LINKAGES

The Advisory Group may be informed and advised by other various and already established SRKW working groups and committees, which are generally threat-based. A list of other currently active groups is provided at Annex B.

Discussion Question: Are there other relevant or related working groups or discussion forums that should be included in this table?

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Annex A: Participant List

Sector	Name	Position	Affiliation	E-mail
Indigenous representatives			UBC	
			First Nations Summit	
			FNFC	
			FNFC	
			FNFC	
NGOs			Raincoast Conservation Foundation	
			Georgia Strait Alliance	
			WWF Canada	
			David Suzuki Foundation	
			Natural Resources Defence Council	
			Vancouver Aquarium [Oceans Wise / CORI Team]	
Shipping Industry			Port of Vancouver	
			Shipping Federation of Canada	
			Chamber of Shipping	
			Canadian Ferry Association	
Fishing Industry			Sport Fishing Advisory Board	
			BC Seafood Alliance	
Whale Watching			Pacific Whale Watching Association	

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Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca
Municipal Government			City of Vancouver	
Federal government	Rebecca Reid	Regional Director General, Pacific Region	Fisheries and Oceans Canada	Rebecca.Reid@dfo-mpo.gc.ca
	Carmel Lowe	Regional Director, Science, Pacific Region Science	Fisheries and Oceans Canada	Carmel.Lowe@dfo-mpo.gc.ca
	Andy Thomson	Regional Director, Fisheries Management	Fisheries and Oceans Canada	Andrew.Thomson@dfo-mpo.gc.ca
	Sylvie Lapointe	ADM, Fisheries and Harbours Management	Fisheries and Oceans Canada	Sylvie.Lapointe@dfo-mpo.gc.ca
	Michelle Sanders	Director, Clean Water Policy	Transport Canada	Michelle.Sanders@tc.gc.ca
	Megan Nichols	Director General, Environmental Policy	Transport Canada	Megan.Nichols@tc.gc.ca
	Yvette Myers	Executive Director, Oceans Protection Plan	Transport Canada	Yvette.Myers@tc.gc.ca
	Marc D'Iorio	DG, Industrial Sectors, Chemicals, and Waste Directorate	Environment and Climate Change Canada	Marc.diorio@canada.ca
	Cecilia Wong	Senior Ecosystem Scientist	Environment and Climate Change Canada	cecilia.wong@canada.ca
	Helen Davies	Field Unit Superintendent Coastal BC	Parks Canada	Helen.Davies@pc.gc.ca

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Annex B: Existing Working Groups/Committees			
Name of engagement activity	**Description**	**Purpose**	**Contact Person**
SRKW committee	Developed from need to have more engagement with First Nations and stakeholders around management measures for SRKW to reduce threat of prey availability and secondarily disturbance	ToR being drafted; but generally provide for engagement with First Nations and Stakeholders to discuss and get input on management actions for SRKW related to abating threat of reduced prey availability	Jeff Grout
Canada-United States			
Toxics Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. Toxics working group formed as one of the three to support the Task Force.	Identify, research, and analyze potential actions for consideration.	
Vessels and Noise Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. The Working Group on Vessels and Noise reports to the Washington State Southern Resident Killer Whale Task Force	To develop recommendations on actions to reduce physical and acoustic disturbance impacting SRKW.	
Prey Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of	Identify range of actions to be considered to abate threat of reduced prey availability within Habitat, Harvest, Hydro, Hatcheries, Predations; prioritize, identify conflicts and synergies and deliver refined set of actions to Task Force to be considered in	Lisa Jones Federal Representative

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	Southern Residents and necessary to secure a healthy and sustained population for the future. Prey working group formed as one of three to support the Task Force.	final report due Nov.1 2018	
Salish Sea Transboundary Ecosystem Indicators (TBI) Project	The TBI project is led by Environment and Climate Change Canada (ECCC) and the United States Environmental Protection Agency (US EPA) to characterize the state of ecosystem health in the Salish Sea (overlaps with SRKW critical habitat) and convene subject experts to identify threats and responses to concerning trends. Ten indicators are tracked including SRKW abundance, toxics in the food web and chinook abundance. A public facing website supports communication of project outcomes.	The TBI project is a commitment under the ECCC - US EPA Statement of Cooperation to share information and foster collaboration on priority issues in the Salish Sea ecosystem.	
DFO/ National Oceanic and Atmospheric Administration prey working group	Group that has organized workshops to review and understand the science on prey availability for SRKW and identify potential management action.		
SRKW and Underwater Vessel Noise			
Enhancing Habitat Cetacean Observation (ECHO) Advisory Working Group (AWG)	The ECHO AWG brings together a broad spectrum of interests from Canada and US to address threats to at-risk whales.	The role of the AWG is to provide the ECHO program management team with input, advice and recommendations during the development and execution of the program's projects and initiatives.	
Enhancing Habitat Cetacean Observation (ECHO) Vessel Operators Committee (VOC)	The ECHO VOC was established in December 2016 to provide the ECHO Program team with advice, support and guidance pertaining to potential mitigation options that may directly impact the shipping industry.	To bring key stakeholders together to develop mitigation options to reduce underwater vessel noise	
Ship Noise Mitigation Risk Assessment	The Ship Noise Mitigation Risk Assessment was commissioned by Transport Canada to assess and quantify the navigation safety risks associated with introducing or	The purpose of the stakeholder engagement sessions was to present the results of the TC commissioned risk assessment, and seek feedback	

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	implementing potential mitigation measures to address underwater noise in the Salish Sea.	from key industry stakeholders, First Nations and US Tribes in the Salish Sea region.	

*** While the Government of Canada is actively participating in the sub-working groups in terms of information sharing and identifying opportunities for collaborations, it is only an observer on the Task Force and will not be part of recommendations made to the Governor.**

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SOUTHERN RESIDENT KILLER WHALES
INDIGENOUS AND MULTI-STAKEHOLDER ADVISORY GROUP

AGENDA

Monday July 30, 2018 9:30 am- 12:30 pm
Location: 401 Burrard St. Room
2nd Floor, Boardroom C and D

Time	Agenda Item	Objective & Materials	Presenter(s)
9:30AM – 9:45AM *(15 mins)*	**Welcome, Opening Remarks & Introductions** • Opening Remarks • Review Agenda • Ratify Summary Report from first meeting	Materials: 1. Draft Agenda 2. Summary Report: June 22	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region
9:45AM-11:15AM *(1.5 hours)*	**Updates / Recent Developments** 1. Update on amended Marine Mammal regulations 2. Update on proposed New Critical Habitat under Amended RKW recovery strategy 3. Lateral Displacement in Strait of Juan de Fuca / Vessel Slow Down in Haro Strait 4. Science Activities 5. Other updates (non-federal) 6. Opportunity for participants to provide other updates.	Materials: 1. PowerPoint Presentations on each of the updates to be provided at the meeting. 2. Other hand-out's on updates.	Update 1: **Andy Thomson**, Regional Director, Fisheries Management, DFO Update 2: **Cheryl Webb**, Regional Director, Ecosystem Management, DFO Update 3: **Michelle Sanders**, A/Director General, Environmental Policy, TC and ECHO Update 4: **Carmel Lowe**, Regional Director, Science, DFO
11:15AM-12:12PM *(1 hour)*	**Review draft Terms of Reference** Discussion based on draft Terms of Reference and guiding question in document. **Discuss Forward Agenda** Overview of proposed areas for discussion going forward.	Objective: Review draft Terms of Reference & discussion on priority areas for discussion in supporting the establishment of a forward agenda. Materials: 1. Draft Term of Reference 2. Presentation on forward agenda discussion (provided at the meeting).	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region Discussion with input from all participants.
12:15AM – 12:30PM *(15 mins)*	**Closing Remarks** Next Steps & Action Items	Objectives: Identify next steps & action items	**Chair: Rebecca Reid** Regional Director General, DFO – Pacific Region

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Dozie, Juachi

From: Johal, Sharan
Sent: July-25-18 5:05 PM
To: Harber, Lee; Barton, Meagan; Thomson, Andrew; Davis, Neil
Subject: RE: SRKW Meeting Invite via Email
Attachments: Draft Agenda for July 30.docx

She had edits to the first two sections of the agenda. I've made the edits (see attached). Will send email now.

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: Harber, Lee
Sent: July-25-18 5:01 PM
To: Johal, Sharan; Barton, Meagan; Thomson, Andrew; Davis, Neil
Subject: RE: SRKW Meeting Invite via Email

I am on standby to make updates.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

From: Johal, Sharan
Sent: 2018–July-25 4:59 PM
To: Barton, Meagan; Thomson, Andrew; Harber, Lee; Davis, Neil
Subject: RE: SRKW Meeting Invite via Email

RR has updates…. Coming shortly.

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: Barton, Meagan
Sent: July-25-18 4:58 PM
To: Johal, Sharan
Subject: RE: SRKW Meeting Invite via Email

Thank you!!!

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

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s.19(1)

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From: Johal, Sharan
Sent: July-25-18 4:56 PM
To: Barton, Meagan
Subject: RE: SRKW Meeting Invite via Email

Awesome! Will send out shortly and bcc Lee.

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: Barton, Meagan
Sent: July-25-18 4:51 PM
To: Johal, Sharan
Cc: Harber, Lee; Davis, Neil; Thomson, Andrew
Subject: SRKW Meeting Invite via Email
Importance: High

Hi Cara,

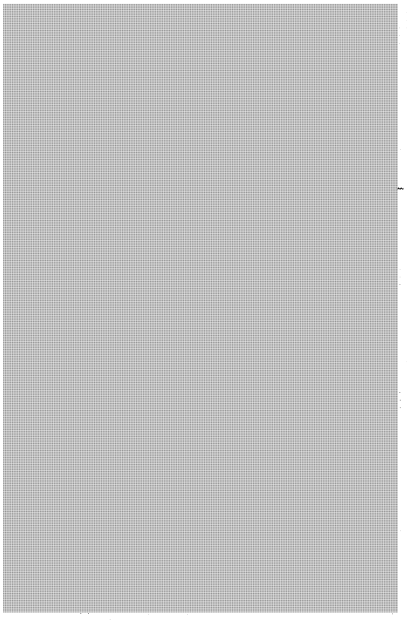
Thanks again for sending these out on short notice.

The following should be included in the invite:

1) Invite cover email
2) Draft Agenda
3) Draft ToR
4) Summary Report
5) Participant list – this is just for your reference, I have copied the email addresses from the list below so it's easier for you to send out.

Numbers 2-4 are attachments (3 in total in the email invite), #1 should be pasted in the body of the email.

Please bcc the following:



Mark.Zacharias@gov.bc.ca
Jennifer.McGuire@gov.bc.ca

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[redacted]
Yvette.Myers@tc.gc.ca
Helen.Davies@pc.gc.ca
Sylvie.Lapointe@dfo-mpo.gc.ca
Rebecca.Reid@dfo-mpo.gc.ca
Carmel.Lowe@dfo-mpo.gc.ca
Andrew.Thomson@dfo-mpo.gc.ca

Please cc the following people:
Marc.diorio@canada.ca
cecilia.wong@canada.ca
Megan.Nichols@tc.gc.ca
Michelle.Sanders@tc.gc.ca

Thanks again,

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
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SOUTHERN RESIDENT KILLER WHALES
INDIGENOUS AND MULTI-STAKEHOLDER ADVISORY GROUP

AGENDA

Monday July 30, 2018 9:30 am- 12:30 pm
Location: 401 Burrard St. Room
2nd Floor, Boardroom C and D

Time	Agenda Item	Objective & Materials	Presenter(s)
9:30AM – 10:15AM *(45 mins)*	**Welcome, Opening Remarks & Introductions** • Opening Remarks • Review Agenda • Ratify Summary Report from first meeting	Materials: 1. Draft Agenda 2. Summary Report: June 22	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region
10:15AM-11:15AM *(1 hour)*	**Updates / Recent Developments** 1. Update on amended Marine Mammal regulations 2. Opportunity for participants to provide other updates 3. Update on proposed New Critical Habitat under Amended RKW recovery strategy 4. Other updates (non-federal) 5. Lateral Displacement in Strait of Juan de Fuca / Vessel Slow Down in Haro Strait 6. Science Activities	Materials: 1. PowerPoint Presentations on each of the updates to be provided at the meeting. 2. Other hand-out's on updates.	Update 1: **Andy Thomson**, Regional Director, Fisheries Management, DFO Update 2: **Cheryl Webb**, Regional Director, Ecosystem Management, DFO Update 3: **Michelle Sanders**, A/Director General, Environmental Policy, TC and ECHO Update 4: **Carmel Lowe**, Regional Director, Science, DFO
11:15AM-12:12PM *(1 hour)*	**Review draft Terms of Reference** Discussion based on draft Terms of Reference and guiding question in document. **Discuss Forward Agenda** Overview of proposed areas for discussion going forward.	Objective: Review draft Terms of Reference & discussion on priority areas for discussion in supporting the establishment of a forward agenda. Materials: 1. Draft Term of Reference 2. Presentation on forward agenda discussion (provided at the meeting).	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region Discussion with input from all participants.
12:15AM – 12:30PM *(15 mins)*	**Closing Remarks** Next Steps & Action Items	Objectives: Identify next steps & action items	**Chair: Rebecca Reid** Regional Director General, DFO – Pacific Region

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Dozie, Juachi

From: Sloan, Lara
Sent: July-25-18 12:34 PM
To: Davis, Neil
Subject: RE: URGENT - Media Lines - Death of SRKW calf

Hi Neil. NHQ always wants the new info that addresses the initial media questions at the top. I could move the mgmt. measures to the top, but they will just move them back.
Thanks for your edits.
[redacted] Janine Malikian will be your contact for all marine mammal issues.
Cheers,
Lara

From: Davis, Neil
Sent: July-25-18 12:28 PM
To: Sloan, Lara; Cottrell, Paul; Doniol-Valcroze, Thomas; MacConnachie, Sean; Malikian, Janine
Subject: RE: URGENT - Media Lines - Death of SRKW calf

Edits in red below. I also think we need to pull forward the mgmt. measures we've implemented to feature in the primary media lines for this issue, rather than leaving them at the bottom of the previously approved messaging.

From: Sloan, Lara
Sent: Wednesday, July 25, 2018 12:10 PM
To: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Doniol-Valcroze, Thomas <Thomas.Doniol-Valcroze@dfo-mpo.gc.ca>; MacConnachie, Sean <Sean.MacConnachie@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>
Subject: URGENT - Media Lines - Death of SRKW calf
Importance: High

Hi. Any comments or concerns before I send these to Andy Thomson and Carmel Lowe for approval? Sheila Thornton has approved. The Minister's office is requesting these ASAP.
Thank you,
Lara

Issue:
On July 24, 2018 at 11:40 am, Southern Resident Killer whale J35 was observed off the Victoria waterfront with a calf. Approximately 30 minutes later, personnel from the Center for Whale Research were in attendance and photographed J35 carrying a dead calf on her rostrum. It is a significant loss for the Southern Resident population, whose numbers are dangerously low; there has not been successful birth in the population for three years.

Media lines -

- The loss of any calf to the Southern Resident Killer whale population has a significant impact on population recovery.

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- Over the last 6 weeks, DFO scientists have identified 75 individuals from the SRKW population around Southern Vancouver Island. J35's calf was the only calf that has been spotted this year.

- In addition to the loss of J35's calf, the scientific community continues to express concern over the condition of J50, a 3 year old juvenile who appears emaciated.

- DFO scientists are collecting samples to support a comparison of fecal hormones to identify whether SRKW pregnancy loss is significantly higher than what is experienced in the NRKW population. Preliminary data from this field study will likely be available in late 2019.

previously approved messaging

· The Government of Canada is committed to the protection and recovery of the iconic and, culturally and ecologically significant, Southern Resident Killer Whale.

· The Minister of Fisheries, Oceans, and the Canadian Coast Guard and the Minister of Environment and Climate Change have determined that the Southern Resident Killer Whale is facing imminent threats to its survival and recovery.

· The Government of Canada is committed to protecting these whales, and is taking actions to protect and recover the species. We are weighing all the options to ensure protections are in place as rapidly as possible.

· We have taken and continue to take concrete action to protect Southern Resident Killer Whales, such as:

- Fisheries and Oceans Canada has introduced new salmon fishery management measures to increase prey availability and reduce disturbance from salmon fishing in three key Southern Resident Killer Whale foraging areas: Strait of Juan de Fuca, Gulf Islands and the mouth of the Fraser River. These measures will aim to reduce harvest of key chinook salmon stocks by 25-35% in northern and southern B.C., a key prey species for SRKW. The 25-35% reduction is a coastwide number to address long-term Chinook declines across the region, and is a separate measure not specific to SRKW. The foraging areas are specifically so that the Southern Resident Killer Whale can feed without competition and noise in known preferred areas for feeding.

- Full closures for recreational finfish and commercial salmon fisheries will be implemented in the Strait of Juan de Fuca and the Gulf Island. Partial closures will be put in effect for the mouth of the Fraser River.

o We have introduced new regulations that prohibit vessels from approaching Southern Resident Killer Whale closer than 200m—this will help minimize noise disturbance and allow the whales to feed more easily.

s.16(2)

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Khanna, Sukriti

From: Harber, Lee
Sent: July-25-18 11:33 AM
To: Davis, Neil
Subject: Forward Agenda Discussion
Attachments: Forward Agenda Discussion - SRKW Advisory Group.ppt

Hi Neil.

For your review please see attached.

I've structured the forward agenda slides (6-8) by key threat and then organized them for a common approach to each meeting:

- Federal overview of activities for the key threat, under the lens of the 3 interests identified by participants (i.e. measurable targets, monitoring/compliance, engagement/collaboration)
- Presentation by one of the members related to the key threat.
- Roundtable Discussion with questions grouped by activity themes (i.e. Mgmt measures, research/monitoring, engagement).

Please let me know if we are on the right track here.

Thanks

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

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Discussion: Forward Agenda

SRKW Indigenous and Multi-Stakeholder Advisory Group
July 30, 2018

Canada

Setting the forward Plan

- We are currently delivering a wide range of SRKW recovery measures across federal departments under different initiatives.
- In order to set a collaborative forward agenda, it is important that we:
  - Work together to identify priority areas for discussion to support a forward agenda for this Advisory Group.
  - Integrate your views, interests, and priorities into the delivery of these activities.

Canada

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Overview of Federal Actions

- DFO, TC, and ECCC are working together to support recovery of SRKW through a wide range of measures under 4 major initiatives:
  - 1) RKW Recovery Strategy & Action Plan, 2) Oceans Protection Plan, 3) Science-Based Whale Review, and 4) Whales Initiative.
- Our work and activities under these initiatives will be prioritized consistent with **near-term** priorities.
- We will continue to focus our efforts on key threats that have been identified:
  - i.e. prey availability, physical & acoustic disturbance, contaminants, and vessel strikes.

Canada

What we heard from you

- At the June 22 technical briefing and roundtable discussion, some key areas of interest were identified:
  - How will compliance with recovery measures will be implemented;
  - The need to for setting measurable targets (short & long-term);
  - How the federal government will be collaborating with the Province, Stakeholders, and Indigenous Groups.

Canada

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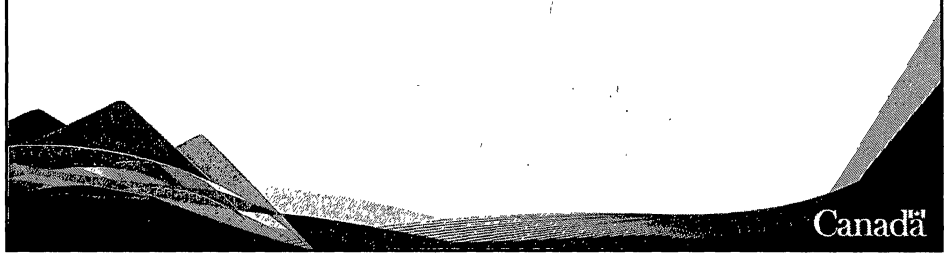
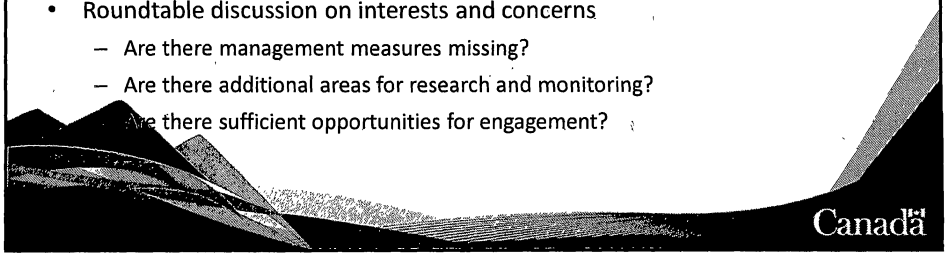
We would like to propose the following forward agenda that will structure our discussions at future meetings



Meeting Theme 1: **Prey Availability**

- Federal overview presentation on priority activities supporting the abatement of the key threat; prey availability:
  - Overview of how measurable targets are being set (short/long-term)
  - Examples of monitoring and compliance activities
  - Opportunities for engagement and collaboration on recovery efforts
- E.g. Presentation DFO conservation and Protection and Transport Canada on Aerial Surveillance
  - Update on status, what's working, what is challenging? What have we learned.
- Roundtable discussion on interests and concerns
  - Are there management measures missing?
  - Are there additional areas for research and monitoring?
  - Are there sufficient opportunities for engagement?



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Meeting Theme 2: **Physical & Acoustic Disturbance**

- Federal overview presentation on priority activities supporting the abatement of the key threat; Physical and Acoustic Disturbance
  - Overview of how measurable targets are being set (short/long-term)
  - Examples of monitoring and compliance activities
  - Opportunities for engagement and collaboration on recovery efforts

  Presentation
- E.g. Presentation TC/ECHO on progress and lessons learned from Vessel Slowdown and lateral displacement trials
  - Update on status, what's working, what is challenging? Lessons learned.
- Roundtable discussion on interests and concerns
  - Are there management measures missing?
  - Are there additional areas for research and monitoring?
  - Are there sufficient opportunities for engagement?

Canada

Meeting Theme 3: **Contaminants**

- Federal overview presentation on priority activities supporting the abatement of the key threat; contaminants:
  - Overview of how measurable targets are being set (short/long-term)
  - Examples of monitoring and compliance activities
  - Opportunities for engagement and collaboration on recovery efforts
- E.g. Presentation by Province of BC on key priorities for managing contaminants in the context of SRKW recovery.
  - Regulatory and non-regulatory measures, monitoring
- Roundtable Discussion on interests and concerns
  - Are there management measures missing?
  - Are there additional areas for research and monitoring?
  - Are there sufficient opportunities for engagement?

Canada

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Dozie, Juachi

From: Barton, Meagan
Sent: July-25-18 4:51 PM
To: Johal, Sharan
Cc: Harber, Lee; Davis, Neil; Thomson, Andrew
Subject: SRKW Meeting Invite via Email
Attachments: 1. Invite Cover Letter.docx; Draft Agenda for July 30 docx.docx; DRAFT TOR - SRKW Indigenous and Multi-stakeholder Advisory Group.docx; Summary Report - SRKW Technical Briefing and Roundtable.docx; participant list - July 30.docx

Importance: High

Hi Cara,

Thanks again for sending these out on short notice.

The following should be included in the invite:

1) Invite cover email
2) Draft Agenda
3) Draft ToR
4) Summary Report
5) Participant list – this is just for your reference, I have copied the email addresses from the list below so it's easier for you to send out.

Numbers 2-4 are attachments (3 in total in the email invite), #1 should be pasted in the body of the email.

Please bcc the following:

[redacted]
Mark.Zacharias@gov.bc.ca
Jennifer.McGuire@gov.bc.ca
[redacted]
Yvette.Myers@tc.gc.ca
Helen.Davies@pc.gc.ca

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Sylvie.Lapointe@dfo-mpo.gc.ca
Rebecca.Reid@dfo-mpo.gc.ca
Carmel.Lowe@dfo-mpo.gc.ca
Andrew.Thomson@dfo-mpo.gc.ca

Please cc the following people:
Marc.diorio@canada.ca
cecilia.wong@canada.ca
Megan.Nichols@tc.gc.ca
Michelle.Sanders@tc.gc.ca

Thanks again,

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

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Dear Participant,

On behalf of Fisheries and Oceans Canada (DFO), Transport Canada (TC), and Environment and Climate Change Canada (ECCC), I would like to thank you for your interest in participating in our upcoming Southern Resident Killer Whale (SRKW) Indigenous and Multi-Stakeholder Advisory Group meeting on July 30, 2018.

This meeting will be an opportunity to formally establish the Advisory Group, provide updates on current recovery measures underway, and collectively discuss a forward agenda for future meetings.

At this time, I would also like to invite you to propose any updates that you would like to present at the meeting and we will add this to the agenda. Please submit any items that you wish to provide an update on by Friday July 27 to Lee.Harber@dfo-mpo.gc.ca.

Meeting date, time, and location
The meeting will take place on Monday, July 30, 2018 from 9:30am to 12:30pm at 401 Burrard Street, Vancouver, BC, 2nd floor, Boardroom 2C and 2D.

Please note that the meeting has been extended from 2 to 3 hours in duration.

If you are unable to attend in person, a teleconference option is available:

Telephone Number: 1-877-413-4790
Conference ID:

Meeting Overview:

The meeting will begin with introductions and a review of the meeting agenda and the ratification of the summary report from the June 22nd, 2018 technical briefing and roundtable discussion. Federal officials will then provide an update on a few of the recovery measures that are currently being implemented. Next we will review the draft Terms of Reference for the Advisory Group and also have a discussion on a proposed forward agenda.

Please find attached a detailed meeting agenda that provides additional details on the structure of the meeting.

We continue to seek your input and experience in designing a process that will serve as an effective and efficient forum for communication and collaboration.

I look forward to working with you.

Sincerely,

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Rebecca Reid
Regional Director General
Pacific Region

cc: M. Sanders, Transport Canada
M. Nichols, Transport Canada
M. D'Iorio, Environment and Climate Change Canada
C. Wong, Environment and Climate Change Canada

Canada

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TECHNICAL BRIEFING AND ROUNDTABLE ON SOUTHERN RESIDENT KILLER WHALE RECOVERY
JUNE 22, 2018
VANCOUVER, BRITISH COLUMBIA

SUMMARY: WHAT WE HEARD

DRAFT

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6. Threat Abatement for SRKW 5

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Key Messages 6

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Meeting Objectives

- Provide an overview of the management efforts undertaken over the last several years.
- Review new measures in today's announcements, under the Whales Initiative.
- Engage in a roundtable discussion on the way forward, including a proposal for an Indigenous and multi-stakeholder advisory committee.

Opening Remarks:

Deputy Ministers:

- Acknowledged the importance of the protection and recovery of the Southern Resident killer whale (SRKW), the significant efforts that have been undertaken to date, including the Science Based review of threats to SRKW and the Symposium to convene diverse interests toward SRKW recovery, and the new measures that have been announced under the Whales Initiative.
- Emphasized that measures will need to go beyond immediate actions being announced but as an ongoing process of continually strengthening measures as more information and science becomes available.
- Working together with First Nations and stakeholders, including NGOs and industry to maximize the effectiveness of recovery measures being implemented.

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Roundtable: Key Themes from invited participants

1. Establishing a Forum for Engagement

- Overall recognition that the Southern Resident Killer Whale (SRKW) population is facing imminent threats to its survival and recovery and that protection and recovery actions will benefit from collaboration between agencies and multiple interests including Indigenous, NGO and industry interests.
- Strong endorsement for a SRKW Indigenous and multi-stakeholder advisory committee.
- This committee could facilitate valuable engagement with many groups – amongst each other and with the relevant federal departments.
- Effective plans to support SRKW recovery should include:
    - Clear objectives and goals as they relate to the needs of the SRKW;
    - Targeted levels of reduction among threats to recovering viable populations of SRKW
    - Immediate actions on threats that are well understood.
- Adaptive management and longer term research on threats that are less understood
- Effective requirements of an Advisory Committee should include:
    - Terms of Reference;
    - Clear direction on who and how actions will be achieved;
    - Trust built and established in a short time with members open about own information and goals;
    - Decision-makers who can effect change to be present on a regular basis at meetings.

2. Management Approach

The management approach for SRKW recovery and protection needs to consider:

Short term vs. Long-term Measures

- Identify and implement short term/immediate actions
- Adaptive management (i.e., measures continually improved through science and knowledge) supports good policy development
- Adaptive management is a process that takes time and cannot be relied upon to produce immediate actions or measures (i.e., the associated timeline is too long to address recovery for the SRKW population)
- The federal government needs to provide direction on how to implement a requirement/action not just continue to seek justification or additional evidence regarding the effectiveness of recovery measures.

Voluntary vs. Regulatory Measures

- Consider effectiveness and appropriateness of voluntary and/or regulatory actions;
- Voluntary cooperation on recovery measures that are mutually agreed upon may be implemented immediately or in the near-term. With cooperative monitoring and data sharing on the effectiveness of measures, voluntary actions may lend well to adaptive management including course correction if appropriate.

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- Regulations take time to develop however may be more broadly applied with compliance promotion and enforcement, and would provide greater certainly among interests about recovery measures. With broader implementation, there would be improved data to inform adaptive management decisions

Targets and Measurable Results

- To be successful, identified measures/activities to reduce threats to SRKW viability must have: a) alignment with objectives for recovering SRKW population, b) clear reduction targets that reflect SRKW needs and interactions among threats, and c) performance measures to indicate the effectiveness of measures.

- To inform adaptive action, identification of research needs and provision of science advice needs to be timely. It is important to think about the measures in place and how to measure the effects of these protections.

3. Monitoring and Enforcement

- There is general concern for how monitoring and enforcement will be implemented and made effective for SRKW recovery and protection. Clarification of how the new regulations will be enforced is also needed.
- Whale detection in real time is an important tool.

4. Indigenous Rights and Access

- Fisheries management decisions and SRKW recovery measures can have impacts on First Nations' ways of life, including fisheries for food, social and ceremonial purposes, and this should be carefully considered and respected so that access and rights are preserved.
- Long term planning is important, but to get buy in and support, short term recovery measures are necessary. To build the relationships with First Nations these short term measures need to be appropriate and meaningful.

5. Federal and Provincial Collaboration

- Federal and Provincial governments need to work together to coordinate respective recovery actions especially as it pertains to habitat protection and restoration for Chinook and Coho Salmon (e.g., water quality for juvenile salmon in river and out to sea; effects of logging and fire management)

6. Threat Abatement for SRKW

Actions to abate the threat of reduced prey availability need to:

- Be broad and consider all components, including harvest (e.g., at sea and in tidal waters), hatchery production, and habitat (e.g., juvenile Chinook and Coho Salmon survival related to water quality and habitat from freshwater to sea, spawning success including clear access to spawning grounds – protection and restoration)
- Consider existing initiatives around salmon survival and conservation (e.g., Wild Salmon Policy, efforts under the Oceans Protection Plan) and identify where efforts may be aligned.

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- Need to consider the Chinook Salmon take from Alaska and discuss reductions on Alaska's catch to achieve greater escapement in Canada and more Chinook Salmon for SRKW.

Actions to abate other threats (vessel strike and disturbance):

- Vessel strikes should be considered as one of the threats to SRKW.
- Further development, investment and application of whale detection in real time is needed to help abate threats to SRKW (e.g., vessel strikes, acoustic/physical disturbance); clear goals and timeline are needed.

Actions to abate the threat of environmental contaminants:

- Sources and sinks of contaminants will be an important focus going forward, particularly in urban areas to understand impacts to SRKW habitat, prey availability, and toxics in prey.
- Sampling in the Fraser and other rivers will be a method of determining if there are adverse impacts to habitat and prey from waste water and runoff to the system; examining leachate from land fill areas will help determine if this is a source of contamination.
- The Disposal at Sea regulations under Canadian Environmental Protection Act serve as protective controls that are currently in place but it will be important to look at these closely to see if there are areas for improvement e.g. monitoring sites more closely to establish more protective limits and to ensure contaminants such as PBDEs are not increasing.
- Under the Chemicals Management Plan, contaminants known or suspected to be affecting whales, such as flame retardants (e.g. PBDEs), existing controls will be evaluated and strengthened

Key Messages, Next Steps & Actions Committed

Key Messages

- Overall strong support received from participants for the establishment of an Indigenous and multi-stakeholder advisory committee
- Ensure preservation of Indigenous economic benefits, Indigenous rights and cultural practices.
- The Advisory Group must have a clear, well defined role.
- Short and long term goals are needed, but short term action must be a priority for immediate threat abatement.
- Need to identify what additional short term actions are required and who needs to be involved in implementing them.
- Identify when and where voluntary and/or regulatory measures are most effective.
- Decision makers need to attend meetings; be willing to listen.
- Science needs must be identified to ensure research is appropriately addressing questions within timelines for SRKW recovery.
- Enforcement activity related to management measures and new regulations needs to be clarified and clearly communicated.

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Next Steps & Actions Committed

- Based on input from participants during the roundtable discussion, a draft Terms of Reference will be developed and shared for input prior to the next meeting.
- A follow-up meeting with all participants will take place in 4-6 weeks' time to discuss:
  - draft Terms of Reference;
  - group membership, roles and responsibilities;
  - meeting frequency;
  - Milestones and deliverables;
  - Recent developments / progress on SRKW measures;
  - need for technical sub-committees / working groups to inform/support the advisory committee
    - identify existing SRKW-related initiatives that may align and provide support to the committee
- A summary of what was heard at this meeting will be provided to all participants.

DRAFT

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Annex A: Questions and Responses

1. **How will the new requirements under the Marine Mammal Regulations be enforced?**
    - **How will enforcement differ between whales and pinnipeds?**
    - **How will aerial surveillance be able to differentiate between a vessel approaching an SRKW or the other way around?**
    - **Can different regulation apply for Transient Killer Whales to Resident Killer Whales in context of whale watching?**

The amendments to the *Marine Mammal Regulations* include expanding the scope of application of the Regulations to include conservation and protection of marine mammals in Canada and Canadian fisheries waters. These amendments introduce a general minimum approach distance of 100 m for whales, dolphins and porpoises and provide an alternative approach distance tailored to particular circumstances, including a minimum approach distance of 200 m for all Killer Whale populations in B.C. and the Pacific Ocean.

Anyone who contravenes the Regulations may be charged with an offence under the *Fisheries Act* and, if convicted, may be subject to punishment of a fine up to $100,000 on summary conviction, or $500,000 if the Crown proceeds by indictment, or, for a subsequent offence, a higher fine or imprisonment.

To support the Whales Initiative, aerial surveillance for SRKW is being enhanced by shifting efforts of Fisheries Aerial Surveillance patrols over their critical habitat to verify compliance with distance and disturbance provisions of the updated regulations and enforce fisheries closures. The increased aerial surveillance will complement ongoing vessel enforcement patrols that will also monitor closed areas. The fishery officers on the aircraft will be able to determine the distance between the vessels and SRKW using the surveillance equipment on the aircraft. This information will be available to local enforcement personnel should it be needed for further action.

SRKW are physically similar to other types of KW, as such they are difficult to tell apart. To ensure the best protection for SRKW, approach distances under the MMRs have been made to apply all KWs.

2. **In aerial surveillance programs, how far out to sea will they go to capture illegal high seas fishing? What arrangements with other countries are in place for aerial surveillance?**

Canada does not currently have agreements in place with other countries (including the U.S.) for aerial surveillance.

3. **Need a multipronged approach that explores impacts resulting from the Alaska fishery. What is status of negotiation for reducing Alaska fishery to increase prey availability in Canadian waters?**

Canadian and U.S. representatives on the Pacific Salmon Commission (PSC) recently concluded the renegotiation of five chapters of the Pacific Salmon Treaty, including Chapter 3 (Chinook). If approved by both countries, the new chapters would be in place for 10 years, beginning January 1, 2019 (through 2028). Negotiations within the PSC considered the important ecosystem role played by Pacific salmon, particularly Chinook. The PSC has recommended a number of changes to the Chinook chapter, including harvest reductions in Canadian and U.S. (Alaskan) fisheries to address conservation concerns for Chinook stocks in both countries. The proposed changes include up to a 7.5% reduction in harvest for

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the U.S. Southeast Alaska (SEAK) Chinook fishery, which will support conservation and rebuilding of Canadian and U.S.-origin Chinook and may also improve Chinook availability for SRKW.

Under the revised Chapter, Canada would also reduce Chinook harvest in the West Coast of Vancouver Island (WCVI) fishery and in some of the inside (Individual Stock Based Management or ISBM) fisheries. These reductions would align with domestic conservation measures for Chinook identified in the 2018/19 Pacific Salmon IFMP and support increased prey availability, as well as reduce vessel-related disturbance for SRKW in Canadian waters.

4. How will issues of prey (Chinook and Chum) availability and health be addressed with province of BC? Is there an MOU currently in place?

There is currently no MOU in place between Province of B.C. and DFO. However, the Province is part of the Species at Risk Coordinating Committee (SARCC) and the Species at Risk Steering Committee, which are two committees established by the Canada-British Columbia Agreement on Species at Risk (April 2005). The purpose of this Agreement is to ensure a coordinated and focused approach to the delivery of species at risk protection and recovery in BC. It does so by: setting out the respective roles and responsibilities of Canada and British Columbia (the Parties) with respect to species at risk protection and recovery in British Columbia; establishing the coordinating mechanisms needed to consult on key decisions, establish joint priorities, share information and design coordinated programs of work; and, providing opportunities to jointly develop species at risk policies where appropriate. Through these committees the Province is engaged with the federal government on species at risk.

5. What efforts are being made to increase Chinook salmon abundance?

DFO has a Chinook production program encompassing most of the Canadian coast delivered through the Salmonid Enhancement Program (SEP). Current hatchery production directly supports fisheries, provides key assessment information used to manage Chinook stocks, and fulfils key international obligations for Canada under the Pacific Salmon Treaty. DFO-SEP currently produces Chinook salmon at 16 DFO operated facilities, 11 contract facilities, and on a smaller scale by some of its partners at 25 Public Involvement Program facilities. Target Chinook releases from these facilities is approximately 40 million juvenile fish per year. This includes 36 million juveniles produced in southern BC.

6. Regarding recreational finfish closures in Gulf Islands, are there any plans for direct observation to determine if the closure contributes to any change for SRKW success in the area?

There are a variety of sources of information that may be useful for helping to assess the effectiveness of management measures. Potential performance metrics could include SRKW body condition, use and foraging success for SRKW, acoustic monitoring and available assessment information for Chinook salmon. Ongoing and future research through DFO Science and others (e.g. NOAA) could provide pieces of information that could be reviewed to inform effectiveness of management action. This information will likely require a lengthier time period to assess the effect of any one specific action while also recognizing that any cause and effect relationship will be challenging to demonstrate. Aerial surveillance and on-water enforcement, along with documentation of SRKW occurrence in this area will occur.

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In general, monitoring of effectiveness of management actions taken to abate threats to SRKW recovery is complex and challenging. Identification of performance metrics to evaluate effectiveness of any potential management measures taken requires both science and management input to understand what is possible and how it may be measured, including when it may not be feasible.

DRAFT

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Annex B: Participant List

Sector	Name	Position	Affiliation	Present
Indigenous representatives			UBC	X
			First Nations Summit	X
			FNFC	X
			FNFC	X
			FNFC	X
NGOs			Raincoast Conservation Foundation	X
			Georgia Strait Alliance	X
			WWF Canada	X
			David Suzuki Foundation	X
			Natural Resources Defence Council	X
			Vancouver Aquarium [Oceans Wise / CORI Team]	X
			Oceanwise	X
Shipping Industry			Port of Vancouver	Did not attend
			Port of Vancouver	X
			Shipping Federation of Canada	X
			Chamber of Shipping	X
			Canadian Ferry Association	X
			BC Ferries	X
			Sport Fishing Advisory Board	X
			BC Seafood Alliance	X
Whale Watching			Pacific Whale Watching Association	X
			Eagle Wing Tours (PWWA VP)	Phone
			Springtide whale watching and eco tours	Phone
			Vancouver Whale Watch	phone
Provincial Government			Ministry of Environment and Climate Change Strategy	X
Municipal Government	*No attendee*	-	City of Vancouver	?
Federal government	Rebecca Reid	Regional Director General, Pacific Region	DFO	X
Federal government	Carmel Lowe	Regional Director, Science, Pacific Region Science	DFO	X
Federal government	Andy Thomson	Regional Director, Fisheries Management	DFO	X
Federal government	Kevin Stringer	Associate Deputy Minister	DFO	X

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Federal government	Sylvie Lapointe	ADM, Fisheries and Harbours Management	DFO	X
Federal government	Michelle Sanders	Director, Clean Water Policy	TC	X
Federal government	Megan Nichols	Director General, Environmental Policy	TC	X
Federal government	Michael Keenan	Deputy Minister	TC	X
Federal government	Yvette Myers	Executive Director, Oceans Protection Plan	TC	X
Federal government	Marc D'Iorio	DG, Industrial Sectors, Chemicals, and Waste Directorate	ECCC	X
Federal Government	Cecilia Wong	Senior Ecosystem Scientist	ECCC	X
Federal Government	Mary-Ann Spicer	Manager, Chemicals Management Division	ECCC	Phone
Federal Government	Christopher Marshall		ECCC	Phone
Federal Government	Kendra Moore	Fisheries and Aquaculture Management	DFO	Phone
Federal Government	Robert Dick	Regional Director	TC	X

Draft

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s.19(1)

Southern Resident Killer Whale: Indigenous and Multi-Stakeholder Advisory Group – Participant List

Sector	Name	Position	Affiliation	E-mail
Indigenous representatives			UBC	
			First Nations Summit	
			FNFC	
			FNFC	
			FNFC	
NGOs			Raincoast Conservation Foundation	
			Georgia Strait Alliance	
			WWF Canada	
			David Suzuki Foundation	
			Natural Resources Defence Council	
			Vancouver Aquarium [Oceans Wise / CORI Team]	
Shipping Industry			Port of Vancouver	
			Shipping Federation of Canada	
			Chamber of Shipping	
			Canadian Ferry Association	
Fishing Industry			Sport Fishing Advisory Board	
			BC Seafood Alliance	
Whale Watching			Pacific Whale Watching Association	
Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca

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s.19(1)

Southern Resident Killer Whale: Indigenous and Multi-Stakeholder Advisory Group – Participant List

	Jennifer McGuire (alternate)	Assistant Deputy Minister	Environmental Sustainability Division	Jennifer.McGuire@gov.bc.ca
Municipal Government			Metro Vancouver Regional District	
Federal government	Rebecca Reid	Regional Director General, Pacific Region	Fisheries and Oceans Canada	Rebecca.Reid@dfo-mpo.gc.ca
Federal government	Carmel Lowe	Regional Director, Science, Pacific Region Science	Fisheries and Oceans Canada	Carmel.Lowe@dfo-mpo.gc.ca
Federal government	Andy Thomson	Regional Director, Fisheries Management	Fisheries and Oceans Canada	Andrew.Thomson@dfo-mpo.gc.ca
Federal government	Sylvie Lapointe	ADM, Fisheries and Harbours Management	Fisheries and Oceans Canada	Sylvie.Lapointe@dfo-mpo.gc.ca
Federal government	Michelle Sanders	Director, Clean Water Policy	Transport Canada	Michelle.Sanders@tc.gc.ca
Federal government	Megan Nichols	Director General, Environmental Policy	Transport Canada	Megan.Nichols@tc.gc.ca
Federal government	Yvette Myers	Executive Director, Oceans Protection Plan	Transport Canada	Yvette.Myers@tc.gc.ca
Federal government	Marc D'Iorio	Director General, Industrial Sectors, Chemicals, and Waste Directorate	Environment and Climate Change Canada	Marc.diorio@canada.ca
Federal Government	Cecilia Wong	Senior Ecosystem Scientist	Environment and Climate Change Canada	cecilia.wong@canada.ca
Federal Government	Helen Davies	Field Unit Superintendent Coastal BC	Parks Canada	Helen.Davies@pc.gc.ca

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Dozie, Juachi

From: Harber, Lee
Sent: July-25-18 5:40 PM
To: Leslie, Karen; Brekke, Heather; Gallant, Nicole; MacConnachie, Sean; Eros, Carole; Moore, Kendra; Johansen, Jeff; Spence, Brenda; Cottrell, Paul; Nener, Jennifer; Cauffope, Genevieve; Galbraith, Ryan; Ho, Agatha; Hayes, Trish; Chmelnitsky, Elly; Malikian, Janine; Thar, Jonathan; Silverstein, Adam
Cc: Thomson, Andrew; Webb, Cheryl; Davis, Neil
Subject: SRKW OPS Committee tomorrow
Attachments: SRKW Operations Committee - Minutes July 19.docx

Hi folks,

Please find attached the draft minutes from last week's meeting. For tomorrow:

Agenda
Standing Items:

- Update - new proposed RKW Critical Habitat (Heather)
- Update - SRKW Advisory Group (lee)
- Roundtable

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

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SRKW Operations Committee – July 19 (Thursday)

Agenda

Standing Items:

1. Update: new proposed RKW Critical Habitat Consultations (Heather) +
    - Recreational Fishery developments (Carole)
2. Update: SRKW Advisory Group (lee)

Other items:

3. Discussion for future fishery management considerations (Neil)
4. Discussion on coordination of web information related to SRKW in region and NHQ (Communications)
5. Roundtable Discussion

Meeting Notes:

1. External review of draft recovery strategy: new proposed critical habitat
    - 30 day review: 12 letters, media highlights, elected
        i. 3 concerns: timing of external review period (fishing season rec), assumption that CA would result in immediate fishing closure (not the case), misunderstanding of the science on how CA for SRKW was established - areas, also concerns over process and recent fishery closures that happens to be in existing CA habitat areas
        ii. May 24 commitment- imminent threat determination, legal mechanism is the SARA recovery strategy. Expedited process, approvals: region, and PCA, legal 60 day comment period - allow us to meet timeline of posting of update strategy by end of december2018.
        iii. [redacted]
    - Significant concern from the recreational fishery sector.
    - West coast guide association (call on Monday) - seeking clarity on science - seeking dialogue.
    - Questions of management - rationale on 2 areas for CA vs. other areas for habitat (primary)
    - Would like an opportunity for dialogue
    - People generally understand that CA does not mean fishery closures
    - Monday communicating out results on recent process
        - Should we be doing that on this call? (follow-up)
        - Neil and Carole to follow up

2. Update: SRKW Advisory Group
    - Upcoming meeting on July 30 (Monday)
        - Secretariat developing draft ToR, Agenda
    - Key themes from first meeting on June 22
        - Monitoring / Compliance and Enforcement
        - Setting measurable targets
    - Objectives include:

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- Information sharing on federal management/recovery activities, collaboration, issue discussion

Ken – comments on if there will be broader engagement strategy SRKW strategy & New Minister briefing on status

Lee – yes, SRKW engagement approach will link with OPP and whales initiative.

3. Analysis of what other fisheries are closed and could pose a threat to SRWK activities e.g. physical / acoustic disturbance.
    - Look at fishery managements
    - Discussion around whether we should be taking further action given new CA areas
    - Consultation cycle - wind up in the fall - will need to be ahead.
    - Jennifer: salmon - pull together the background information - use by fishers - see if there are particular areas of consideration for measures/protection. Assessment of areas where we already have measures in place.
    - People asking questions - what did we learn first time around - future considerations

4. Communications -
    - information for recreational fishery sector
    - Areas staff spending significant amount of time developing materials: sometimes difficult to find information
      Consolidation / central location repository
      Storyboard: gaps
        - What is happing across sectors
        - Not complete, lacks linkages, across 3 departments
        - Not comprehensive
        - Short term / vs. long-term activities

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Mbarushimana, Jenny

From: Jones, Lisa Ann
Sent: July-26-18 8:45 AM
To: helen.davies@pc.gc.ca
Cc: sara.approvals@pc.gc.ca; christine.hurst@pc.gc.ca; ernie.gladstone@pc.gc.ca; alana.plummer@pc.gc.ca; genevieve.goggin@pc.gc.ca; leah.deforest@pc.gc.ca; nicole.kroeker@pc.gc.ca; Brekke, Heather; Leslie, Karen; Webb, Cheryl
Subject: RE: Endorsement of proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales

Hello Helen,

Thank you very much for your prompt review and response regarding the proposed Amended Recovery Strategy for thee Northern and Southern Resident Killer Whales.

We are looking to have this move forward to NHQ by the end of this week.

Cheers
Lisa

From: helen.davies@pc.gc.ca [mailto:helen.davies@pc.gc.ca]
Sent: July-25-18 8:33 PM
To: Webb, Cheryl; Jones, Lisa Ann
Cc: sara.approvals@pc.gc.ca; christine.hurst@pc.gc.ca; ernie.gladstone@pc.gc.ca; alana.plummer@pc.gc.ca; genevieve.goggin@pc.gc.ca; leah.deforest@pc.gc.ca; nicole.kroeker@pc.gc.ca
Subject: Endorsement of proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales

Hello Cheryl & Lisa Ann,

As the Field Unit Superintendent for Coastal BC Field Unit and on behalf of Parks Canada, I endorse the posting of the proposed Amended Recovery Strategy for Northern and Southern Resident Killer Whales (Orcinus orca) in Canada on the Species at Risk Public Registry for the 60-day public consultation period.

Helen Davies
Field Unit Superintendent | Directrice de l'unité de gestion
Coastal British Columbia Field Unit | Unité de gestion, Côte de la Colombie-Britannique
Parks Canada | Parcs Canada
2220 Harbour Road, Sidney, B.C. V8L 2P6 | 2220, rue Harbour, Sidney C.-B. V8L 2P6
helen.davies@pc.gc.ca
Telephone | Téléphone (250) 654-4048 / Facsimile | Télécopieur (250) 654-4014
www.parkscanada.gc.ca | www.parcscanada.gc.ca
Government of Canada | Gouvernement du Canada

Parks Canada - 450 000 km^2 of memories / Parcs Canada - 450 000 km^2 de souvenirs

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Khanna, Sukriti

From: Brekke, Heather
Sent: July-26-18 10:59 AM
To: Jones, Lisa Ann
Subject: FW: Draft_Reply_2018-501-00076_[redacted].docx
Attachments: MECTS-#3933967-v5-Draft_Reply_2018-501-00076_[redacted]hb.docx

Fyi, saved this to the [redacted] folder on the drive.

From: Brekke, Heather
Sent: July-26-18 10:58 AM
To: pac.prmc / pac.urpcm (DFO/MPO)
Subject: RE: Draft_Reply_2018-501-00076_[redacted]docx

Hi Candace,

Please see attached comments, consistent with our current draft of the response letters.

Best
Heather

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: July-26-18 10:53 AM
To: Brekke, Heather
Subject: Draft_Reply_2018-501-00076_[redacted].docx

Hi Heather,

We originally drafted this with the simple paragraph about forwarding the letter to you. But we've recently been drafting another response on this topic with some materials from your department and wondered if we should include some of that. I have included a more detailed response in the green highlighted paragraphs. Please edit this draft to reflect your preferred response.

We're looking for your approval on this draft response **by 11 am Friday, but sooner if at all possible.**

Please use track changes to insert any necessary edits in the attached document, and FORWARD the document to XPAC PRMCU.

Your review should also include technical accuracy and consistency with policy direction.

If you think someone else in Pacific Region or in Legal Services must approve and they aren't on our approval list, **please advise us ASAP and we will forward the documents for their approval**.

Thanks,

Heather

****Please direct all e-mails regarding ministerial correspondence to XPAC PRMCU.****

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Candace McGuire, Heather Fowlie and Alison Jacques

Manager, Pacific Region Ministerial Correspondence Unit
Fisheries and Oceans Canada/Government of Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

Gestionnaires de la correspondance ministériel
Pêches et Océans Canada/Gouvernement du Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

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Ministerial Correspondence / Correspondance ministérielle Approval Form / Formulaire d'approbation

MCCU DOCKET # / N° DU DOSSIER UCCM : 2018-001-01293	MCCU CONTACT / RESPONSABLE À L'UCCM :
REPLY BY DEPARTMENT/ RÉPONSE DU MINISTÈRE	

DATE AND DEADLINES / DATE ET ÉCHÉANCE

DUE DATE TO MINO / ÉCHÉANCE AU CM : (mm-dd-yyyy / mm-jj-aaaa)	/2018	DATE RECEIVED IN MCCU / DATE DE RÉCEPTION À L'UCCM : (mm-dd-yyyy / mm-jj-aaaa)	/2018

COMMENTS / APPROACH – COMMENTAIRES / APPROCHE

APPROVALS / APPROBATIONS

Level / Niveau	Name, Title and Sector / Nom, titre et secteur	Assigned Date / Date fixée	Date Due / Échéance	Date Approved / Date d'approbation	Changes / Modifications
3 FM - SARA - Manager	Heather Brekke Acting Team Lead, Marine Species at Risk (SARA), Fisheries Management Branch				
2 FAM - Resource	Neil Davis Director, Resource Mgmt. – Program Delivery, Fisheries Management Branch				
Regional Director / Directeur(trice) régional(e)	Andrew Thomson Regional Director, Fisheries Management Branch				
	Approval needed in Ottawa? Yes / No				
IF NECESSARY / SI NÉCESSAIRE					
Regional Director General / Directeur(trice) général régional(e)	Rebecca Reid, Regional Director General, Pacific Region				
ADM / RDG / DC / CO / AC SMA / DGR / SA / BC / CA					
Indigenous Affairs / Affaires autochtones Legal / Services juridiques IGA / AI					
IF / SI PROVINCIAL / TERRITORIAL					
DM / SM					
PCO / BCP					

OTHER CONSULTATIONS / AUTRES CONSULTATIONS

INFO COPIES TO / COPIES POUR INFORMATION À (Office, Branch, Date / Bureau, direction, date)	DEVELOPED WITH SME(S) OR OTHER STAKEHOLDER(S) / ÉLABORÉ AVEC EXPERT(S) EN LA MATIÈRE OU AUTRE(S) INTERVENANT(S) (Name, Title, Branch, Date / Nom, titre, direction, date)
•	• Manager, Ministerial Correspondence, Pacific Region
OGD / AMG - (Name, Title, Branch, Date / Nom, titre, direction, date)	
•	

FOR MCCU USE / RÉSERVÉ À L'UCCM

b.c.c. / Cci – (Name, Department / Nom, ministère)	c.c. – (Name, email address / contact info / Nom, courriel, coordonnées)

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ATTACHMENTS TO RESPONSE / PIÈCES JOINTES À LA RÉPONSE

Field Code Changed

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s.21(1)(a)

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[redacted]

Port Renfrew Chamber of Commerce

[redacted]

[redacted]

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Field Code Changed

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s.21(1)(b)

[redacted]

Thank you for writing. I appreciate the opportunity to respond to your concerns.

Yours sincerely,

Andrew Thomson
Regional Director
Fisheries Management Branch
Pacific Region

Cheryl Webb
Regional Director
Ecosystems Management
Pacific Region

b.c.c.: Heather Brekke

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Brekke, Heather
Sent: July-26-18 3:16 PM
To: Shaikh, Sharlene
Subject: FW: Scenario Note Meeting with SFI July 2018.docx
Attachments: Scenario Note Meeting with SFI July 2018_hb.docx

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From: Brekke, Heather
Sent: Thursday, July 26, 2018 11:08 AM
To: Eros, Carole; Creighton, Sheila
Subject: RE: Scenario Note Meeting with SFI July 2018.docx

Input into the SN is attached.

As discussed, the BN for the amended Recovery Strategy for RKW is currently sitting with the RDG and is anticipated to leave the region today.

Heather

From: Eros, Carole
Sent: July-26-18 10:57 AM
To: Brekke, Heather; Creighton, Sheila
Subject: Scenario Note Meeting with SFI July 2018.docx

Hi Heather and Sheila,

As you are aware the Minister is here next week. One of this meetings will be with the Sport Fishing Institute. I am in the process of developing a scenario note due today. One of the items they will bring up with him is the timing and level of engagement from the RKW CH process [redacted] Can you please have a look at the first issue and provide key points and messages. I tried to give it a go but i'm not up on all the speaking points and status details.

Sorry but need this ASAP. It only needs to be a short paragraph so nothing too detailed please!

Thanks!
Carole

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Mbarushimana, Jenny

From: Creighton, Sheila
Sent: July-26-18 2:15 PM
To: Brekke, Heather; Eros, Carole
Cc: Amaya, Libardo
Subject: RE: Scenario Note Meeting with SFI July 2018.docx
Attachments: Scenario Note Meeting with SFI July 2018_hb sc.docx

Hi Carole,
Sorry, I was at an offsite meeting all morning. Please see edits attached.

Sheila

Sheila Creighton
604-666-0961

From: Brekke, Heather
Sent: July-26-18 11:08 AM
To: Eros, Carole; Creighton, Sheila
Subject: RE: Scenario Note Meeting with SFI July 2018.docx

Input into the SN is attached.

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Sent: July-26-18 10:57 AM
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Subject: Scenario Note Meeting with SFI July 2018.docx

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Thanks!
Carole

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Fisheries and Oceans Canada | Pêches et Océans Canada

Approved by (insert name, title, region)

The RDG should always approve SN's going out from the Pacific Region. Please insert RDG's name.

Docket #: 20##-###-#####
Security Classification: UNCLASSIFIED

Comment [D1]: Fill in docket number

Comment [D2]: Classification should be labelled on every page. Not underlined.

SCENARIO NOTE

MEETING WITH THE SPORT FISHING INSTITUTE ON JULY XX, 2018

Overview

The executives of the Sport Fishing Institute (SFI) of British Columbia (BC) are meeting with you to convey the economic significance of their sector and current challenges. Your objective is to confirm your openness to discuss their specific issues and to convey your support for further follow-up with DFO Officials.

BC's recreational fishing sector is a major contributor to the economy. On an annual basis over 300,000 licenses are purchased for fishing in tidal waters, and the sector produces $936 million in annual sales, paying $150 million in wages and benefits, and creating over 8,400 jobs. The SFI represents the business entrepreneurs (fishing lodges, resorts, certified tidal angling guides, hotels, charter operators, manufacturers, distributors, tackle shops, dealers, boat marine manufacturers, regional airlines and key insurance industry organizations).

It is expected that the key issues that will be raised during the meeting are: the need for a new vision for BC's recreational sector, concerns regarding the timing and level of recent engagement on Resident Killer Whale Critical Habitat and the MPA Network and concerns regarding delays in proposed regulation changes.

1. Timing and level of recent engagement

The Department has recently engaged the recreational sector on two processes - proposed Resident Killer Whale Critical Habitat and the Northern Shelf Bioregion Marine Protected Area Network. The Sector has expressed concern with the timing of these consultations as they are during a timing when they are largely unavailable.

An external review of t~~T~~he ~~proposed~~ draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada*, which includes proposed new identified critical habitat areas as well as clarifications to existing critical habitat, ~~has entered regional approvals. A 30 day external review process of the draft~~ was held from June 12 – July 11, 2018. We recognize that the timing of this process coincided with a busy time of year for your harvesters. The imminent threat of extinction faced by Southern Resident Killer Whales led to the decision to not delay the external review to later in the year, and we very much appreciate your understanding in this regard. Please note that there is an additional opportunity to provide input on the proposed Amended Recovery Strategy when it is posted to the Species at Risk Registry for a 60-day online public comment period, anticipated to begin in late August 2018. You will receive a pre-notification email identifying the general time frame for the comment period and how to provide feedback.~~Once regional and national approvals are complete, the~~

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~~document will be posted as a proposed document on the Species at Risk public registry for a 60-day online national comment period, anticipated to start August 20, 2018. The regional review process prompted extensive negative reaction from the recreational fishing community, who raised concerns about that the timeline for input occurred within their busy fishing season when the sector is largely unavailable. They have similar concerns with the timing of the upcoming 60 day process and have urged the Department to consider delaying the start of the 60-day process to the fall and to expand the engagement to community meetings rather than internet-based only.~~

[redacted]

[redacted]

Minister's Objectives

Your objective is to.

Key Messages

-
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s.21(1)(a)

s.21(1)(b)

2. Updating the vision for BC's recreational fishery sector

The SFI and SFAB continue to express concern that there is insufficient funding available from DFO to properly manage the recreational fishery and to meet the mutually agreed to *Vision for Recreational Fisheries in British Columbia.*

On May 25, 2018, DFO staff facilitated a joint planning session with the SFI and SFAB to update the vision document by reviewing trends in the sector, and to highlight key opportunities to further develop its economic and social potential. The SFI will seek your continued support and commitment to a comprehensively funded recreational fisheries management program.

Minister's Objectives

Your objective is to confirm the importance of the recreational fishery to BC, and DFO's commitment to work with SFI to develop strategies to strategically extract maximum value from the sector; A new vision document will be one step to achieving this objective.

Key Messages

- **It is important that the recreational fishing sector has a plan and strategy to grow its economic and social contributions to Canada.**
- **I look forward to reading the revised document.**

3. Regulatory Amendments

The SFI may want to highlight the need to advance outstanding regulation change requests, particularly changing the wording on tidal licenses from catch must be recorded in "ink" to make it clear that records must be "permanent") and the change request around transport and packaging. Section 13 of the *British Columbia Sport Fishing Regulations, 1996 (BCSFR)* establishes the personal possession limit for recreationally caught fish. Under this regulation, once a possession limit of a species has been reached an angler must secure these fish at their

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s.21(1)(a)

s.21(1)(b)

ordinary residence before they can retain additional fish of that species. Transport of another person's catch is not permitted under the regulation if the transporter is also carrying their own possession limit.

DFO staff presented a proposal to the SFAB in February 2017 which would permit up to five possession limits to be transported by others subject to documentation. While the proposal did not address all of their concerns, the SFAB supported the proposal in order to make progress on the deficiencies of the current regulations. This regulation change is currently with Legislative and Regulatory Affairs but progress has been delayed due to higher priorities (Bill C-68, SARA listings, critical habitat orders and Oceans Act MPAs).

Minister's Objectives

Your objective is to acknowledge their frustration while confirming that the change requests are in process.

Key Messages

- **I can appreciate your frustrations with legislative delays. The regulatory agenda is very full. Staff will keep you updated on progress.**

Note: SN's should be a maximum of three pages.

The footer should be filled out in: size 8, Times New Roman font. Please ensure the title is NOT in all capitals. It should be in title case.

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Fiche d'acheminement de correspondance
Pêches et Océans Canada

CLASSIFICATION
GCCMS #: 20##-###-#####
EKME #: #######

Comment [D4]: Complete. If a note is Protected B, Protected Solicitor Client Privilege, Confidential or Secret, please delete the EKME line. These types should not be saved in the system.

To:
Pour: Catherine Blewett

Date:

Comment [D5]: Do not date this section. This is to be dated once all parties have approved the note.

Object: **TITLE**
Objet: **TITRE**

From /
De: Name of Regional Director/Area Director, Title

Comment [D6]: **NEW**
Please note this section is for the branch who is the lead in developing the Memo. The RD/AD's name and title should be typed in full. For example: Andrew Thomson, Regional Director, Fisheries Management

Via: Name of Regional Director General, Title

Comment [D7]: **NEW**
Please note: the RDG's name and title should be typed in full. For example: Rebecca Reid, Regional Director General, Pacific

Additional approvals:
Autre(s) approbation(s):

Name
Title

Comment [D8]: Please list any ADM's from the sectors in NHQ that provided significant input.

It is the discretion of your RD/AD to determine if input is significant or not.

Always use signature blocks with the name and title underneath.

☐ Material for the Minister
Documents pour le Ministre

☐ Your Signature
Votre signature

☐ Information

Comment [D9]: Select one with an X

Screen:
Filtre: The Department has assessed this issue in full.

- ☐ It contains no reference to matters covered by the screen relating to J.D. Irving Limited.
- ☐ It contains matters referenced in the screen relating to J.D. Irving Limited, but in our view does not engage the screen.
- ☐ In our view, the screen relating to J.D. Irving Limited should be engaged.

Remarks:
Remarques: This briefing note was developed in consultation with the following regions/sectors: [please list who was consulted internally]

Comment [D10]: This section should include any AD/RD/Director's who provided input or assisted in the development of this Memo.

Please ensure each individual listed in this section has initialled beside their name prior to bringing the docket up to the RDGO.

Distribution: *Please indicate name of people to receive a copy and if prior or following the DM approval. (Remove if no Distribution is required)*

Comment [D11]: Please list any individuals who should receive a copy once approved.
ADM's may be included in this section as an FYI.
This is a great tool to use if you need to inform individuals about a docket, but whom do not need to be consulted during the development of the note.

Drafting Officer/
Rédacteur:

NAME (TEL #)/ Director / admin initials

Comment [D12]: Please complete this section in the same format provided.
The Director approving the Memo will sign/initial here by their name.

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s.21(1)(a)

s.21(1)(b)

Wilkinson, Davida

From: Eros, Carole
Sent: July-26-18 10:57 AM
To: Brekke, Heather; Creighton, Sheila
Subject: Scenario Note Meeting with SFI July 2018.docx
Attachments: Scenario Note Meeting with SFI July 2018.docx

Hi Heather and Sheila,

As you are aware the Minister is here next week. One of this meetings will be with the Sport Fishing Institute. I am in the process of developing a scenario note due today. One of the items they will bring up with him is the timing and level of engagement from the RKW CH process [redacted] Can you please have a look at the first issue and provide key points and messages. I tried to give it a go but i'm not up on all the speaking points and status details.

Sorry but need this ASAP. It only needs to be a short paragraph so nothing too detailed please!

Thanks!
Carole

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Fisheries and Oceans Canada | Pêches et Océans Canada

The RDG should approve SN's go the Pacific Regic insert RDG's nai

Approved by (insert name, title, regio

s.21(1)(a)

s.21(1)(b)

Docket #: 20##-###-#####
Security Classification: UNCLASSIFIED

SCENARIO NOTE

MEETING WITH THE SPORT FISHING INSTITUTE ON JULY XX, 2018

Overview

The executives of the Sport Fishing Institute (SFI) of British Columbia (BC) are meeting with you to convey the economic significance of their sector and current challenges. Your objective is to confirm your openness to discuss their specific issues and to convey your support for further follow-up with DFO Officials.

BC's recreational fishing sector is a major contributor to the economy. On an annual basis over 300,000 licenses are purchased for fishing in tidal waters, and the sector produces $936 million in annual sales, paying $150 million in wages and benefits, and creating over 8,400 jobs. The SFI represents the business entrepreneurs (fishing lodges, resorts, certified tidal angling guides, hotels, charter operators, manufacturers, distributors, tackle shops, dealers, boat marine manufacturers, regional airlines and key insurance industry organizations).

It is expected that the key issues that will be raised during the meeting are: the need for a new vision for BC's recreational sector, concerns regarding the timing and level of recent engagement on Resident Killer Whale Critical Habitat and the MPA Network and concerns regarding delays in proposed regulation changes.

1. Timing and level of recent engagement

The Department has recently engaged the recreational sector on two processes - proposed Resident Killer Whale Critical Habitat and the Northern Shelf Bioregion Marine Protected Area Network. The Sector has expressed concern with the timing of these consultations as they are during a timing when they are largely unavailable.

The proposed *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada*, which includes new identified critical habitat areas as well as clarifications to existing critical habitat, has entered regional approvals. A 30 day external review process of the draft was held from June 12 – July 11. Once regional and national approvals are complete, the document will be posted as a proposed document on the Species at Risk public registry for a 60-day online national comment period, anticipated to start August 20, 2018. The regional review process prompted extensive negative reaction from the recreational fishing community, who raised concerns about that the timeline for input occurred within their busy fishing season when the sector is largely unavailable. They have similar concerns with the timing of the upcoming 60 day process and have urged the Department to consider delaying the start of the 60-day process to the fall and to expand the engagement to community meetings rather than internet-based only.

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Minister's Objectives

Your objective is to.

Key Messages

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2. Updating the vision for BC's recreational fishery sector

The SFI and SFAB continue to express concern that there is insufficient funding available from DFO to properly manage the recreational fishery and to meet the mutually agreed to *Vision for Recreational Fisheries in British Columbia*.

On May 25, 2018, DFO staff facilitated a joint planning session with the SFI and SFAB to update the vision document by reviewing trends in the sector, and to highlight key opportunities to further develop its economic and social potential. The SFI will seek your continued support and commitment to a comprehensively funded recreational fisheries management program.

Minister's Objectives

Your objective is to confirm the importance of the recreational fishery to BC, and DFO's commitment to work with SFI to develop strategies to strategically extract maximum value from the sector; A new vision document will be one step to achieving this objective.

Key Messages

- **It is important that the recreational fishing sector has a plan and strategy to grow its economic and social contributions to Canada.**
- **I look forward to reading the revised document.**

3. Regulatory Amendments

The SFI may want to highlight the need to advance outstanding regulation change requests, particularly

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changing the wording on tidal licenses from catch must be recorded in "ink" to make it clear that records must be "permanent") and the change request around transport and packaging. Section 13 of the *British Columbia Sport Fishing Regulations, 1996 (BCSFR)* establishes the personal possession limit for recreationally caught fish. Under this regulation, once a possession limit of a species has been reached an angler must secure these fish at their ordinary residence before they can retain additional fish of that species. Transport of another person's catch is not permitted under the regulation if the transporter is also carrying their own possession limit.

DFO staff presented a proposal to the SFAB in February 2017 which would permit up to five possession limits to be transported by others subject to documentation. While the proposal did not address all of their concerns, the SFAB supported the proposal in order to make progress on the deficiencies of the current regulations. This regulation change is currently with Legislative and Regulatory Affairs but progress has been delayed due to higher priorities (Bill C-68, SARA listings, critical habitat orders and Oceans Act MPAs).

Minister's Objectives

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Key Messages

- **I can appreciate your frustrations with legislative delays. The regulatory agenda is very full. Staff will keep you updated on progress.**

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Fisheries and Oceans Canada
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Pêches et Océans Canada

CLASSIFICATION
GCCMS #: 20##-###-######
EKME #: ########

To:
Pour: Catherine Blewett

Date:

Object: **TITLE**
Objet: **TITRE**

From /
De: Name of Regional Director/Area Director, Title

Via: Name of Regional Director General, Title

Additional approvals:
Autre(s) approbation(s):

Name
Title

☐ Material for the Minister
Documents pour le Ministre

☐ Your Signature
Votre signature

☐ Information

Screen:
Filtre:

The Department has assessed this issue in full.

- ☐ It contains no reference to matters covered by the screen relating to J.D. Irving Limited.
- ☐ It contains matters referenced in the screen relating to J.D. Irving Limited, but in our view does not engage the screen.
- ☐ In our view, the screen relating to J.D. Irving Limited should be engaged.

Remarks:
Remarques:

This briefing note was developed in consultation with the following regions/sectors: [please list who was consulted internally]

Distribution: *Please indicate name of people to receive a copy and if prior or following the DM approval. (Remove if no Distribution is required)*

Drafting Officer/
Rédacteur:

NAME (TEL #)/ Director / admin initials

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Delaney, Paula

From: Jones, Lisa Ann
Sent: July-26-18 1:07 PM
To: Brekke, Heather
Subject: review of text for letters - to address concern over other info not being considered to id CH and issue with LaPerouse
Attachments: Draft Response_RKW RSa_WCA.doc

Hi,

Can you review the below text for the letter (have included full letter attached to email if it is easier to edit within).

With respect to your concern over critical habitat identification in southwest Vancouver (SWVI) Island, the identification of these proposed areas is based on science advice stemming from research carried out over the last 40 years [http://www.dfo-mpo.gc.ca/csas-sccs/Publications/ResDocs-DocRech/2017/2017_035-eng.html]. Critical habitat is defined based both on geographical boundaries and on the presence of the biophysical features, functions and attributes of the habitat that are required for the survival or recovery of the species and is identified following a precautionary, risk-based approach. The availability of preferred prey is a key feature of critical habitat for Resident Killer Whales (RKW). Along with multi-year visual and acoustic surveys documenting the presence of RKW in the area, SWVI is also identified to be a highly productive salmon habitat, thus meeting this requirement for critical habitat identification.

These proposed areas, along with existing critical habitat, represent only partial critical habitat. As new information identifying or clarifying critical habitat becomes available through peer-review processes, further amendments to the recovery strategy will be undertaken as appropriate. For the current amendment, all feedback received during the external review process and 60-day public comment period will be considered and the document revised as appropriate.

Cheers
Lisa

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

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Fisheries and Oceans Canada

Pêches et Océans Canada

Pacific Region
Suite 200 - 401 Burrard Street
Vancouver, British Columbia
V6C 3S4

Région du Pacifique
Pièce 200 - 401 rue Burrard
Vancouver (C.-B.)
V6C 3S4

s.19(1)

s.21(1)(a)

s.21(1)(b)

Your file *Votre référence*

Our file *Notre référence*

[redacted] West Coast Aquatic

[redacted]

Canada

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s.21(1)(a)

s.21(1)(b)

Sincerely,

Cheryl Webb
Regional Director
Ecosystems Management Branch
Fisheries and Oceans Canada

Helen Davies
Field Unit Superintendent,
Coastal British Columbia Field Unit Parks Canada Agency

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Wong, Eva

From: Panis, Edward
Sent: July-26-18 3:14 PM
To: Brekke, Heather
Subject: FW: SRKW Finfish Closure In Gulf Islands

Hi Heather,

Please see the email below, it came in to the general enquires inbox.

If you can advise how should I respond to this email and future emails like this that would be greatly appreciated.

Thank you,

Edward Panis
Information Clerk
Communications Branch
Fisheries and Oceans Canada/Government of Canada
Edward.Panis@dfo-mpo.gc.ca / Tel: 604-666-1704

Pêches et Océans Canada / Gouvernement du Canada
Edward.Panis@dfo-mpo.gc.ca / Tel: 604-666-1704

From: Trainor, Jodi
Sent: July-26-18 8:16 AM
To: Panis, Edward
Subject: FW: SRKW Finfish Closure In Gulf Islands

Hello,

The following request was received via Fisheries and Oceans Canada's general enquiry service. Please reply directly to the correspondent or find someone who can.

Kindly provide us with a copy of the response that has been sent to the correspondent so we may close our file.

Thank you,
Jodi

General Enquiries
Fisheries and Oceans Canada / Government of Canada
200 Kent Street, Ottawa ON K1A 0E6
info@dfo-mpo.gc.ca / Tel: 613-993-0999 / Fax: 613-990-1866 / ATS: 613-941-6517

Renseignements généraux
Pêches et Océans Canada / Gouvernement du Canada
200, rue Kent, Ottawa (ON) K1A 0E6
info@dfo-mpo.gc.ca /Tél : 613-993-0999 / Téléc : 613-990-1866 / TTY: 613-941-6517

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From: [redacted]
Sent: July-25-18 9:35 PM
To: Fishing / Peche (DFO/MPO)
Subject: SRKW Finfish Closure In Gulf Islands

http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/includes/Gulf_Islands_Finfish_Closure.jpeg

Is it true that all finfish fishing, including rockfish, is closed in the gulf islands?

How does that help the southern resident killer whales?

I think that that is unnecessary and overdone.

Please send me your thoughts.

s.21(1)(a)

s.21(1)(b)

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Dozie, Juachi

From: Brekke, Heather
Sent: July-26-18 11:10 AM
To: Eros, Carole
Subject: Text from RKW memo
Attachments: MECTS-#3939256-v1-MEMO_-_Regional_Approval_of_the_Proposed_Amended_Recovery_Strategy_for_the_Northern_and_Southern_RKW_Jul2318.docx

Hi Carole,

I updated the SN directly, but just had a thought that an additional piece you may want to include in the scenario note (if pressed):

Regarding the science advice:

- [redacted]

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

Pages 1025 to / à 1030
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pages 602 to / à 607

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Dozie, Juachi

From: Brekke, Heather
Sent: July-26-18 2:49 PM
To: Jones, Lisa Ann
Cc: Shaikh, Sharlene
Subject: RE: please use this to review the science paragraphs - highlighted
Attachments: Draft Response_RKW RSa_WCA_hb.doc

From: Jones, Lisa Ann
Sent: July-26-18 2:33 PM
To: Brekke, Heather
Cc: Shaikh, Sharlene
Subject: please use this to review the science paragraphs - highlighted

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

s.19(1)

s.21(1)(a)

s.21(1)(b)

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Fisheries and Oceans Canada

Pêches et Océans Canada

Pacific Region
Suite 200 - 401 Burrard Street
Vancouver, British Columbia
V6C 3S4

Région du Pacifique
Pièce 200 - 401 rue Burrard
Vancouver (C.-B.)
V6C 3S4

Your file *Votre référence*

Our file *Notre référence*

West Coast Aquatic

[redacted]

Canada

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s.21(1)(a)

s.21(1)(b)

[redacted]

Sincerely,

Cheryl Webb
Regional Director
Ecosystems Management Branch
Fisheries and Oceans Canada

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Helen Davies
Field Unit Superintendent,
Coastal British Columbia Field Unit Parks Canada Agency

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Dozie, Juachi

From: Brekke, Heather
Sent: July-26-18 10:58 AM
To: pac.prmc / pac.urpcm (DFO/MPO)
Subject: RE: Draft_Reply_2018-501-00076 ocx
Attachments: MECTS-#3933967-v5-Draft_Reply_2018-501-00076 hb.docx

Hi Candace,

Please see attached comments, consistent with our current draft of the response letters.

Best
Heather

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: July-26-18 10:53 AM
To: Brekke, Heather
Subject: Draft_Reply_2018-501-00076 locx

Hi Heather,

We originally drafted this with the simple paragraph about forwarding the letter to you. But we've recently been drafting another response on this topic with some materials from your department and wondered if we should include some of that. I have included a more detailed response in the green highlighted paragraphs. Please edit this draft to reflect your preferred response.

We're looking for your approval on this draft response **by 11 am Friday, but sooner if at all possible.**

Please use track changes to insert any necessary edits in the attached document, and FORWARD the document to XPAC PRMCU.

Your review should also include technical accuracy and consistency with policy direction.

If you think someone else in Pacific Region or in Legal Services must approve and they aren't on our approval list, **please advise us ASAP and we will forward the documents for their approval**.

Thanks,

Heather

****Please direct all e-mails regarding ministerial correspondence to XPAC PRMCU.****

Candace McGuire, Heather Fowlie and Alison Jacques

Manager, Pacific Region Ministerial Correspondence Unit
Fisheries and Oceans Canada/Government of Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

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Gestionnaires de la correspondance ministériel
Pêches et Océans Canada/Gouvernement du Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

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Fisheries and Oceans
Canada

Pêches et Océans
Canada

Regional Director General
Pacific Region
Suite 200 – 401 Burrard Street
Vancouver, British Columbia
V6C 3S4

Directrice générale régionale
Région du Pacifique
Piéce 200 – 401 rue Burrard
Vancouver C.-B.
V6C 3S4

s.19(1)

s.21(1)(a)

s.21(1)(b)

Your file *Votre reference*
Our file *Notre reference*
2018-501-00076

[redacted]

Canada

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s.21(1)(a)

s.21(1)(b)

[redacted]

Thank you for writing.

Yours sincerely,

Rebecca Reid
Regional Director General
Pacific Region

bcc Heather Brekke

Action	Name of Approver	Date
Original drafted by	Pacific Region Ministerial Correspondence Unit	
Input	Adam Silverstein Acting Regional Manager, Community Involvement and Resource Restoration	July 24, 2018
Edits	Brigid Payne for Cheryl Webb A/Director, Oceans and Salmonid Enhancement Program, Ecosystems Management	July 24, 2018
	Heather Brekke ~~Acting~~ Team Lead, Marine Species at Risk (SARA), Fisheries Management Branch	July 26, 2018
	Neil Davis Director, Resource Mgmt. – Program Delivery, Fisheries Management Branch	
Regional Director / Directeur(trice) régional(e)	Andrew Thomson Regional Director, Fisheries Management Branch	

(NOTE: do not add Rebecca Reid to approvals box.)

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Dozie, Juachi

From: Ludlow, Mandy
Sent: July-26-18 10:44 AM
To: Jansen, Willi; Cottrell, Paul
Cc: Sanderson, Leslie
Subject: RE: Another SRKW dies

I think the Charles is headed to the west coast?

-----Original Message-----
From: Jansen, Willi
Sent: Thursday, July 26, 2018 8:26 AM
To: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Ludlow, Mandy <Mandy.Ludlow@dfo-mpo.gc.ca>
Cc: Sanderson, Leslie <Leslie.Sanderson@DFO-MPO.GC.CA>
Subject: RE: Another SRKW dies

OMG...this is so incredibly sad. Breaks your heart..let us know if there is anything we can do. We will be on the water on Saturday for sure and perhaps tomorrow and MPP is in the area I believe.
Les Sanderson @ [redacted] is on the M Charles....They may be able to assist, or at least be on the lookout for. I have cc'ed him on this email.

FYI I did remove the first part of this email so that the other info did not spread.

Willi Jansen
Fishery Officer | Officier de Pêcherie
Conservation and Protection | Conservation et Protection
(250)746-9721 (office) [redacted] (cell)

-----Original Message-----
From: Cottrell, Paul
Sent: July-26-18 8:01 AM
To: Jansen, Willi; Ludlow, Mandy
Subject: Re: Another SRKW dies

Thank-you, really appreciated the fyi. Last night the dead calf was spotted still being carried by mom at Monark Head. The animals travelled to East Point and we're heading towards the Fraser at dark. Sound watch and straitwatch will be out today. Once mom (J35) drops the calf (we are worries about her health) we are hoping to collect the calf for necropsy. I hope to get the animals location this morning and if the calf is still being carried. If you guys have boats on the water and the calf is not being carried. By mok it would be great if we could try to collect. I'll give you guys a call later this morning. I have a call now on J50 who is not looking good at all. Talk soon.
Best,
Paul

Page 1040

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s.16(2)

s.19(1)

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Dozie, Juachi

From: Jansen, Willi
Sent: July-26-18 1:26 PM
To: [redacted]
Cc:
Subject: RE: Another SRKW dies

Thanks so much for the update [redacted] I have cc'ed Paul on this one, and will text him to make sure he gets message as he is away from office.

Willi Jansen
Fishery Officer | Officier de Pêcherie
Conservation and Protection | Conservation et Protection
(250)746-9721 (office) [redacted] (cell)

-----Original Message-----
From: [redacted]
Sent: July-26-18 1:20 PM
To: Jansen, Willi
Cc: [redacted]
Subject: Re: Another SRKW dies

Talequah is Lawson Reef area trending west. Still carrying her calf.

[redacted]

> On Jul 26, 2018, at 11:10 AM, Jansen, Willi <Willi.Jansen@dfo-mpo.gc.ca> wrote:
>
> No worries [redacted] It is a very sad situation, and I know that everyone wants to ensure not only the survival of SRKW, but also to see them thrive. It is important to all work together on this...all levels of Government, Whale Watchers, NGO's etc ...and on both sides of the border as we certainly hear the same thing here in Canada.
> Keep the hope, and Thank You for your passion.
>
> Willi
>
> Willi Jansen
> Fishery Officer | Officier de Pêcherie
> Conservation and Protection | Conservation et Protection
> (250)746-9721 (office) [redacted] (cell)
>
>
> -----Original Message-----
> From: [redacted]

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> Sent: July-26-18 11:01 AM
> To: Jansen, Willi
> Cc: [redacted]
> Subject: Re: Another SRKW dies
>
> Our vessels are looking Willi.
> [redacted]
>
>
>> On Jul 26, 2018, at 10:51 AM, Jansen, Willi <Willi.Jansen@dfo-mpo.gc.ca> wrote:
>>
>> Our plane just flew over the area from East Point to Boundary Bay ... conditions described as excellent for viewing...Nothing seen. I have notified Paul on this as well.
>>
>> Willi Jansen
>> Fishery Officer | Officier de Pêcherie
>> Conservation and Protection | Conservation et Protection
>> (250)746-9721 (office) [redacted] (cell)
>>
>>
>> -----Original Message-----
>> From: [redacted]
>> Sent: July-26-18 9:56 AM
>> To: Jansen, Willi; [redacted]
>> Cc: [redacted]
>> Subject: RE: Another SRKW dies
>>
>> I will let my guys know.
>>
>> [redacted]
>> San Juan County Sheriff's Office
>> [redacted]
>>
>> -----Original Message-----
>> From: Jansen, Willi <Willi.Jansen@dfo-mpo.gc.ca>
>> Sent: Thursday, July 26, 2018 8:39 AM

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>> To:
>> Cc:
>> Subject: RE: Another SRKW dies
>>
>> Just heard from Paul Cottrell, and Mom (J 35) was still carrying her dead calf at dark last night, past East Point (Saturna) travelling eastbound. They are worried about her health and of course everyone would like to try and recover the calf for a necropsy.
>> This is just so incredibly sad!!!! Anyway, thought I should pass to you as we don't know, at least at this point, where she is. So perhaps let others know so that they can pass on the location right away. In Canada 1-800-465-4336, and I know you would know the number in the US (I don't)
>> Soundwatch and Straitwatch have been notified... as well we have other platforms including the plane.
>>
>> Willi :)
>>
>> Willi Jansen
>> Fishery Officer | Officier de Pêcherie
>> Conservation and Protection | Conservation et Protection
>> (250)746-9721 (office) (cell)
>>
>>
>> -----Original Message-----
>> From:
>> Sent: July-25-18 10:54 PM
>> To:
>> Cc: Jansen, Willi
>> Subject: Re: Another SRKW dies
>>
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>>>>>
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>>>>>
>>>>>
>>> WDFW
>>>
>>>
>>>
>>> -----Original Message-----
>>> From:
>>> Sent: Wednesday, July 25, 2018 10:36 PM
>>> To:
Willi Jansen <Willi.Jansen@dfo-mpo.gc.ca>
>>> Subject: Another SRKW dies

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>>>
>>> I posted this today and pisses me off where we are at.
>>>
>>> "I really believe it is time for NOAA to be removed from the picture. Turn it over to WDFW (Washington Department of Fish and Wildlife) and give them the resources that NOAA is squandering, to bring back the Chinook Salmon.
>>>
>>> [redacted] This is my suggestion to that end to get rid of the agency [redacted] that is second only to Sea World in killing our Southern Resident Killer Whales.
>>>
>>> WDFW in turn could met out funds to Wild Fish Conservancy, Skagit Salmon, Center For Whale Research and other similar NGOs that are determined to bring more food to the table for our SRKW's."
>>>
>>> We are all grieving at the loss of Talequahs calf and soon to die J50 Scarlett.
>>>
>>> [redacted]
>>>
>>>
>>>
>>>

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Dozie, Juachi

From: Teresa Mongillo - NOAA Federal [redacted]
Sent: July-26-18 10:00 AM
To: Brad Hanson; Dawn Noren; Candice Emmons; Marla Holt - NOAA Federal; John Durban - NOAA Affiliate; [redacted] Kenneth Balcomb III; Jenny Atkinson; Cottrell, Paul; Ford, John (Pacific); John Calambokidis; [redacted] Greene, Annely; Kenneth Balcomb III; Thornton, Sheila; Collette Yee; Deborah Giles, PhD; hfearnbach@sealife3.org; Robin Baird
Cc: Lynne Barre
Subject: SRKW Research Coordination Updates
Attachments: 2018 SRKW Research update July.doc

Hi all,

There have been some updates to the 2018 SRKW research table that I wanted to let everyone know about. We also really appreciate everyone's efforts to coordinate with each other out on the water, particularly as we monitor the condition of J50 and with news of the dead calf this week.

One update is the additional field efforts by SWFSC, SR3, Vancouver Aquarium under permit. no 19091 (John Durban, PI). The additional UAS flights to conduct photogrammetry to assess target whales (in particular J16s, including J50, and J17s including J35) will occur Tuesday 7/31- Saturday 8/4 on either the R/V Kohola or R/V Helen (described in updated table). Their preference is to stay beyond a 200yrd distance from the target whales with the boat, but may require the boat to be closer (as authorized under the permit).

Another update to the table is the addition of Robin Baird's permit (No. 20605).

Lastly, t
he National Fish and Wildlife Foundation has released a request for proposals for the 2018 Killer Whale Research and Conservation Program. The RFP can be found at www.nfwf.org/killerwhales and full proposals are due **Monday, August 20 by 11:59 PM EDT**.

Program priorities include the following:

- Increase prey availability
- Improve habitat quality
- Strengthen management through game-changing research

A recording of the applicant webinar may be viewed at https://register.gotowebinar.com/recording/2585536069731505411.

Cheers,
Teresa

--
NOAA Fisheries; Protected Resources Division
7600 Sand Point Way NE, Seattle, WA 98115
Office: 206-526-4749; or 425-347-6935 Ext. 223

s.19(1)

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2018 Research on Southern Resident killer whales

Principle Investigator Permit #	**Investigators**	**Field Dates**	**Locations**	**Vessel**	**Contact Information**	**Research focus**
NWFSC Permit No. 21348 Permit in Canada	Brad Hanson, Dawn Noren, Marla Holt, Candice Emmons, Robin Baird, Greg Schorr, Jeff Hogan, Deborah Giles	May 31- June 16, Sept 6 - 27	Based San Juans- work in Canada & US San Juan Islands	Phoecena 2- 22'Zodiac	Brad's cell [redacted] Candi's cell [redacted]	June-fecal/prey/breath sampling, Sept-DTAGs and fecal/prey sampling, potential biopsy sampling on transients (not SRKWs)
SWFSC, SR3, and Vancouver Aquarium Permit No. 19091 Permit in Canada provided by Coastal Ocean Research Institute of the Vanc. Aquar.	John Durban (SWFSC), Holly Fearnbach (SR3), Lance Barrett-Lennard (Vancouver Aquarium)	May 6- June 3 2018; Sept 2- 30 2018 **Tue 7/31- Sat 8/4	Based San Juans- work in Canada & US San Juan Islands, Strait of Juan de Fuca, Puget Sound and Strait of Georgia, coastal waters of WA	SR3 Research Vessel "Kuapio Kohala", a 31' aluminum catamaran Or SR3s R/V Helen (a 24' red RHIB) **On Friday 5/18 and the morning of Saturday 5/19, the SR3's R/V Kohola will be having a scheduled service. During this time, data collection may occur from the "Morning Star", a 31' Ocean Sport white boat with forward buddy cabin.	John's cell [redacted] Holly's cell [redacted] Lance's cell [redacted]	UAS photogrammetry of SRKW (and other marine mammals including Bigg's/ transients, minke whales, fin whales, and harbor porpoise). Photogrammetry & blow sampling of humpback whales and gray whales (in May if they are still around, in collaboration with CRC)
Center for Whale Research Permit No. 21238 and Permit in Canada	Ken Balcomb, Dave Ellifrit, Melisa Pinnow, Michael Weiss, Howard Garrett, Dan McSweeney	All year	San Juan Islands, Strait of Juan de Fuca, Puget Sound, Possession Sound, Georgia Strait	Sea Hunt-34' trawler, Orca Starlet- 17' RHIB, Shachi (Orcinus)- 22' Boston Whaler, Chimo- 25' Boston Whaler, and Tonto- 27' Ranger Tug	Ken [redacted] Ken's cell [redacted] Dave [redacted]	Photo identification, behavioral observations, social structure, scat sampling opportunistically
Sam Wasser Permit No. 17344	Samuel K. Wasser, Deborah Giles, Collette Yee	June 1 – Oct 31	San Juan Islands	Moja- 21 ft Grady White	Giles' cell [redacted] Collette cell [redacted]	Fecal samples for pregnancy and toxins, also hormones, prey and DNA, transients opportunistically
The Whale	Liz Seely, Taylor Shed,	June 15-	San Juan and S.	L98, Soundwatch- 21',	Boat cell	Boater education and

s.19(1)

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2018 Research on Southern Resident killer whales

Museum Permit No. 2114	Alison Northey	Sept 30	Gulf Islands	Raydiance- 17' blue SAFE boat	[redacted]	vessel monitoring
John Calambokidis 16111	John Calambokidis, Erin Falcone, Greg Schorr, Gretchen Steiger, Jeff Foster, Annie Douglas	Ongoing	CA,WA & OR-outer coast, Puget Sound and Strait of Juan de Fuca	Zodiac Hurricane (Musculus), Red Hurricane (Ziphid), and 2 gray Zodiacs (Physalus and Borealis)	Cell phone [redacted]	Surveys, photo-id, biopsy, tagging focused on large whales, collaborations with gray and humpback, SRKW studies are opportunistic
Robin Baird 20605						
DFO	Sheila Thornton, Brian Gisborne, Paul Cottrell, John Ford	June-Aug	Strait of Juan de Fuca	Hurricane out of Sooke (Gisborne)		Focal follows, activity budgets, foraging efficiency, behavioral response/acoustic recorders in fishery areas, scat, prey collection
NOAA Office for Law Enforcement	Hans Brubaker	Ongoing	Northern Puget Sound	NOAA 27' black SAFE boat w/aluminum cabin	Hans' office (360) 255-7030 OLE main office (206) 526-6133 After hours 1-800-853-1964	Enforcement / Outreach
WDFW Enforcement	Taylor Kimball, Russ Mullins	June 1 – Sept 30	N. Puget Sound	WDFW #6 (33' Cat) WDFW #14 (28' RHIB) WDFW #10 (30' N.Rvr) WDFW#4 (42' Munson)	Sgt. Mullins [redacted] Ofc. Kimball [redacted] (Both Non-Public #s)	Enforcement / Outreach
U.S.-Marine mammal strandings	Kristin Wilkinson (stranding coordinator WA/OR)				1-866-767-6114 hotline	
U.S.- Whale entanglements					1-877-SOS-WHALe 1-877-767-9425	
Marine Mammal	Info sent to Paul				1-800-465-4336;	

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Hotline- Canada	Cottrell and Annely Greene				VHF channel 16	

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s.21(1)(a) s.69(1)(g) re: (a)
s.21(1)(b) s.69(1)(g) re: (e)
s.23

Wong, Eva

From: Leslie, Karen
Sent: July-27-18 1:26 PM
To: Fogliato, Cara
Cc: Fershau, Jonathan; Brekke, Heather; Payne, Brigid; Webb, Cheryl; Davis, Neil
Subject: 2018-505-00063 - amended RS for RKA - Response to RDG Questions

Hi Mark –

Below are the responses to Rebecca's questions on the above noted BN:

1. [redacted]
2. [redacted]

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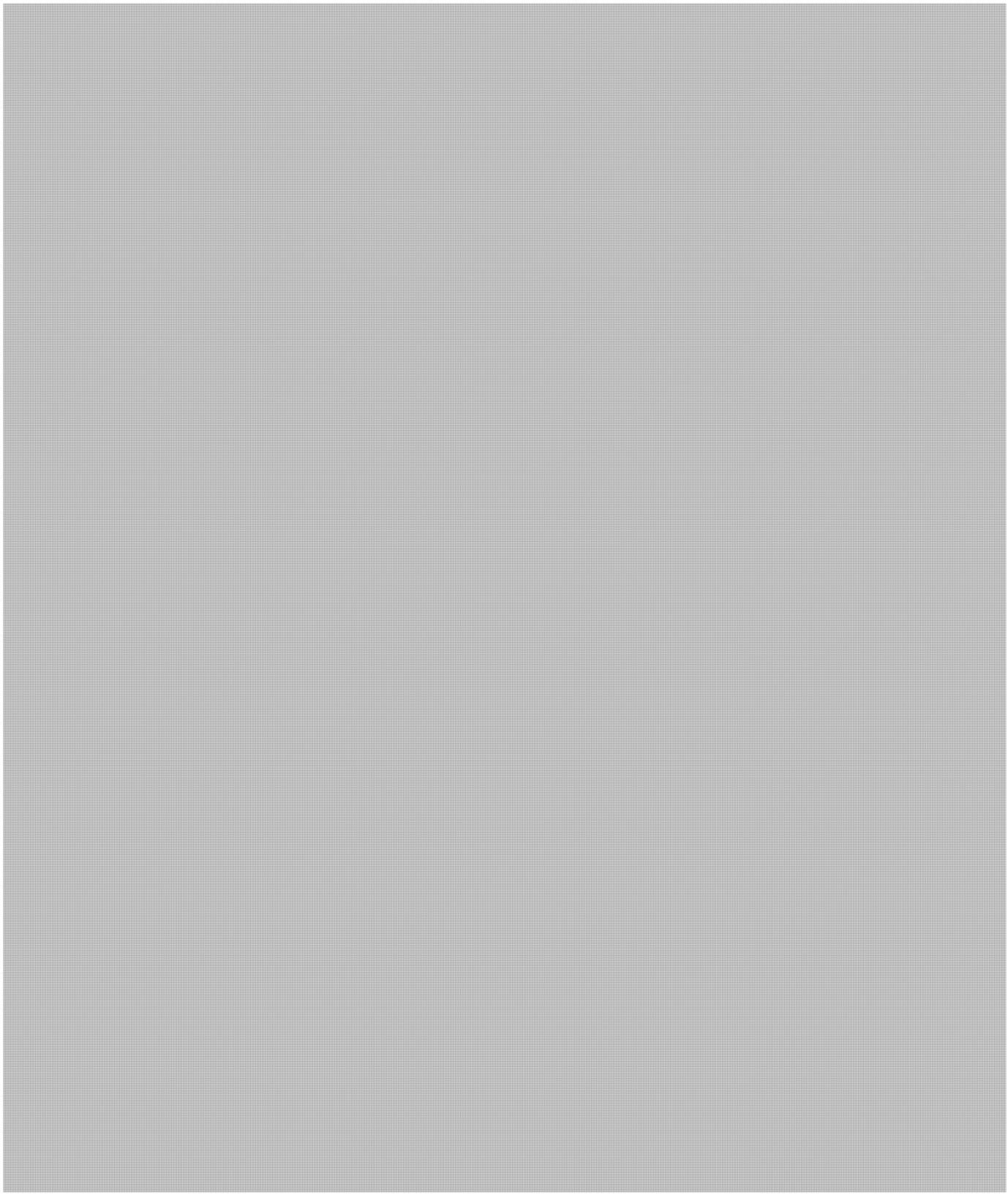
s.21(1)(a)

s.21(1)(b)

s.23



Karen Leslie
Regional Manager, Species at Risk Program
Fisheries and Oceans Canada / Government of Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

Gestionnaire régional, Programme des espèces en péril

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Pêches et Océans Canada / Gouvernement du Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

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Khanna, Sukriti

From: Winfield, Nicholas
Sent: July-27-18 1:55 PM
To: Reid, Rebecca; Morel, Philippe; Thomson, Andrew; Davis, Neil; Webb, Cheryl; D'Iorio, Marc (EC); Goodier, Gwen (EC); Nichols, Megan; Sanders , Michelle; Lapointe, Sylvie
Cc: Busby, Corina
Subject: Background information and Q&As for Multi-stakeholder SRKW meeting on July 30th
Attachments: June 22 announcement update July 27.docx; QAs for multi-stakeholder forum June 27.docx

As requested please find materials to support the discussions at the multi-stakeholder meeting on Monday.

Thank you to Corina for coordinating and compiling this information across Departments.

Nicholas Winfield

Director General | Directeur Général
Ecosystems Management | Gestion des écosystèmes
Aquatic Ecosystems Sector | Secteur des Écosystèmes aquatiques
Fisheries and Oceans Canada | Pêches et Océans Canada
200 Kent Street, Ottawa, Ontario, Canada K1A 0E6
Tel: (613) 998-9088
Government of Canada | Gouvernement du Canada

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July 27, 2018

Status of SRKW announced measures

Announcement	Status
National aerial surveillance program (NASP)	TC is working towards purchase of the aircraft this fiscal year with intent to have it ready for next summer.
Creation of a SRKW Indigenous and Multi-stakeholder group	Participants have been invited and inaugural meeting scheduled for July 30, 2018 in Vancouver.
Lateral displacement trial	A meeting with USCG will take place early next week at which time a date for the start of the trial will be agreed upon.
Haro Strait voluntary slowdown	The 2018 voluntary slowdown has started. TC is encouraged by the reported 80% participation rate in its first week. The voluntary slowdown period will remain in effect until at least September 15. • 15 kn or less for vehicle carriers, cruise and container vessels • 12.5 kn or less for bulkers, tankers, Washington State Ferries and government vessels. ECHO has reported that from July 12th - 19th agents have flagged 76 of 88 transits as potential candidates for participating in the slowdown and 70 of those participated, indicating a total vessel participation rate of **80%.**
Noise management plans	As announced in the Whales Initiative, the Government is working with BC Ferries to develop a first Underwater Noise Management Plan to reduce underwater noise impacts of its fleet on killer whales. It is anticipated that a Noise Management Plan for BC Ferries will be available by August 24th for inclusion in materials available for their Annual General Meeting.. TC is also working to draft a Discussion Document on the concept of Underwater Noise Management Plans for the broader industry. TC will be engaging with stakeholder on this in the fall.
Hydrophone deployment	Since February 1st 2018, under the Oceans Protection Plan – MEQ (Marine Environmental Quality) project for whales – DFO has maintained three autonomous listening moorings in: • the Strait of Juan de Fuca (off Sooke, Jordan River and Port Renfrew), • one in Haro Strait (Canadian side) and • one in Boundary Pass. These moorings are sampling continuously at a sampling frequency of 250 kHz, giving each instrument an acoustic bandwidth between approximately 10 and 125,000 Hz. The hydrophones are approximately 2m off the bottom in water depths ranging between 100 and 200 m. A sixth was added

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	(Swiftsure) in April 2018. Recorders are on a recovery/redeployment schedule and moorings are typically serviced over a few days each month. The locations of these hydrophones were chosen based on more than 10 years of effort-corrected sightings data, passive acoustic monitoring, focal follows and survey results, to be critical habitats for SRKW in Juan de Fuca. Recorder locations were selected to correspond with areas of SRKW habitat use that is affected by commercial vessel traffic (i.e., TMX) in order to acquire two years of baseline data prior to increase in TMX vessel transits. TC: Autonomous deployment at Boundary Pass proceeding through ECHO. For long term real time deployment, a Statement of Work is under development, but cannot be put forward until DFO completes the evaluation of suppliers for the supply arrangement.
MMR Amendment	The amended MMRs were published July 11, 2018 and are in force.
Marine mammal response program	MMRP quarterly reports are being collected and a national quarterly report will be created. Capacity building planning is still underway and in progress for 2018-2019.
Chinook Salmon prey availability	Ongoing as announced – closed areas and catch reductions. DFO will review the closures to inform decisions about the role of these closures over the longer term. DFO is also reviewing data available for other fisheries in key foraging areas for SRKW and whether any further steps are necessary to reduce the threat of prey availability in these areas.
Science for killer whale (DFO)	• Marine mammal megafauna survey is underway • $3M Whale Science for Tomorrow joint initiative between DFO and NSERC was announced on July 17th to support enhancement of research on marine mammals in Canada, with a focus on priority endangered whale populations, including SRKW. Call for proposals currently out and deadline to apply is Aug. 10th. Research proposals on whale health (such as effects of contaminants) and condition (in the context of threat identification), effectiveness of threat mitigations, and whale assessment methodologies (including innovative survey technologies) are being solicited. GoC's initiative to protect and support recovery for whales: • $3.3M over five years was announced for DFO-led research into prey availability for three priority endangered whale

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	populations, including SRKW. Planning for this research is currently underway, and will aim to study foraging success of SRKW in known key foraging areas as well as prey availability over time. • $4.4M/5 years will be dedicated to monitoring of contaminants in whales and their main prey • Contamination in SRKW and SLEB tissues accumulates as a result of eating contaminated prey. Contaminants of concern include pesticides, flame retardants, pharmaceuticals and personal care products. This work will focus on quantifying levels of key contaminants in tissues of both whale species and their main prey to document changes in contaminant loading over time, which will help measure the effectiveness in control measures and to support the identification of new priority management measures. The work proposed by DFO will complement science activities by ECCC which will look at sources of contaminants, air/freshwater/saltwater sampling, and pathway to whale preys. • Work is underway to establish a baseline for assessing the effects of Chinook fishery closures/reductions on SRKW in the future.
Science for killer whale (ECCC)	Contract underway for landfill leachate sampling and work underway to identify target contaminants to be addressed through increased fresh water monitoring program.
Whale innovation challenge prize	The contract for initiating the prize is underway.
Critical Habitat	The external review on the draft amended Recovery Strategy incorporating the newly proposed areas as CH has just ended. The proposed version will be posted to the SAR public registry for a 60d public comment period in mid-August. Plans are in progress to establish the CHO by December 2018.
Increased compliance and enforcement	Enhanced surveillance via FASE patrols-30% increase over the SRKW CH closures. Patrols were initiated on July 13th, 2018. Fishery officers will attempt to follow up on most reported violations in SRKW CH closures.

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Issue	Department	Question	Answer

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

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Announced Measures	DFO	Clarify the disparity between the *MMR* RIAS stating that there is no increase in enforcement costs and the June 22 announcement committing to increased monitoring and enforcement.	The RIAS states that enforcement costs of the marine mammal regulations are not expected to increase and that additional costs to DFO are likely to be minimal as monitoring of activities is already in place. In addition to the analysis that informed the RIAS, it has also been determined by the Government of Canada that the conservation and protection of marine mammals is a priority for the Department and a decision was taken to invest in additional resources to support this work in Canadian coastal waters. The additional resources, announced on June 22, 2018 as part of the Whales Initiative which builds on the Oceans Protection Plan ("Adding more fishery officers on the water to verify compliance with approach distances and disturbances and harassment provisions of the regulations and enforce fisheries closures" and "increasing aerial surveillance patrols"), will be distributed across Canada and will benefit not only the Southern Resident Killer Whale, but also the North Atlantic Right Whale, and the St. Lawrence Estuary Beluga. They will support enforcement of the Marine Mammal Regulation disturbance prohibitions which protect all marine mammals, and the harassment prohibition under the Species At Risk Act which protects all listed threatened or endangered species.
Announced Measures	DFO	Clarify the meaning of "vessels in transit" The Amended MMR do not include any limitation on these exemptions.	Vessels in transit would be vessels that are passing through, that is, they go from origin to destination without deviating from their course for whale watching purposes. Vessels that are in transit are exempt from the approach requirements in the Regulations. However, vessels that are actively engaged in whale watching or that divert their course to approach or follow a whale would not benefit from this exception.

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Announced Measures	DFO	Will national guidelines, when developed, be adhered to by recreational boaters.	The *Marine Mammal Regulations*, including the requirement to maintain an approach distance of not less than 100 metres from marine mammals generally and 200 m from killer whales in the Pacific, apply to all vessels observing whales, whether commercial or recreational. The national guidelines which complement the Regulations, would apply in the same manner.
Announced Measures	DFO	Are national guidelines to accompany the Amended MMR are being developed (as stated in the RIAS)?	The Department of Fisheries and Oceans is updating its national whale watching and marine mammal viewing guidelines to accompany the amended *Marine Mammal Regulations*.
Announced Measures	DFO (Science)	How will the marine mammal survey benefit the SRKW?	Marine mammal surveys will be used to inform the presence and distribution of killer whales. These data can be used to inform or refine critical habitat and their associated features and attributes. Focal follows are being conducted to assess fishing efficacy and other behaviours while capturing information on the presence and proximity of vessels and their type. While the Pacific Region International Sighting Survey of Marine Mammals (PRISMM) targets most cetaceans species, it will cover the range occupied by SRKW and may contribute to detect individuals as well as co-occurring species, some of which may be at risk.
Announced Measures	DFO, TC, ECCC	How does the Government see the announced measures as addressing the imminent threats?	**Prey availability:** The new measures for 2018 are expected to be a significant mitigation to this threat. These measures include a reduction in the total fishery removals for Chinook salmon of 25-35% which aims to increase prey availability for SRKW. As well, fishery closures for recreational finfish and commercial salmon fisheries in portions of the Strait of Juan de Fuca and portions of the Gulf Islands, and partial closures in the mouth of the Fraser River also aim to protect key foraging areas for SRKW. **Acoustic and physical disturbance:**

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			TC has taken significant action to address underwater ship noise in the SRKW critical habitat. In addition to supporting research and collecting baseline data, TC supported the 2017 voluntary trial slowdown in Haro Strait that dramatically reduced noise levels in the area. This success is being built upon in 2018 with another voluntary slowdown in the same area along with an anticipated lateral displacement in the Strait of Juan de Fuca. TC continues to work with large commercial shippers to push for implementation of adaptive, voluntary measures, while establishing the needed authorities to enable mandatory measures when necessary. [redacted] The Government of Canada is strengthening enforcement of its regulatory controls on contaminants.
Critical Habitat	DFO	When will a CHO be in place? What is the intended timing of the critical habitat order? Is this an expedited process?	Identification and protection of critical habitat requires two components of work: identifying the critical habitat in a SARA recovery strategy, and protection of the identified habitat via Ministerial Order or other means that legally protect the critical habitat. The *Recovery Strategy for Northern and Southern Resident Killer Whale* (Orcinus orca) *in Canada* is undergoing an amendment to identify additional critical habitat for Northern and Southern Resident Killer Whale. The document is anticipated to be finalized toward the end of year. While the SARA does require that critical

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			habitat be protected within 180 days of its identification in a recovery document, we are working to expedite this regulatory process.
Critical Habitat	DFO	Why is boundary box approach being used to identify CH? Won't this reduce the habitat protection from the CHO?	The Department's approach to identification of critical habitat is described in the Directive and Guidelines for Identification of Critical Habitat for Aquatic Species at Risk, is consistent with the approach used by both Environment Canada and Parks Canada, and has been used in identifying critical habitat for aquatic species at risk since 2015. Under this direction, a Bounding Box Approach (BBA) is used to identify critical habitat as specific habitat functions, features, and attributes necessary for survival and recovery of the species, which occur in a defined area. The BBA provides a more descriptive approach, and is used when habitat features and their attributes can be described but their location varies yearly, or knowledge of their specific location does not exist or is not practical to obtain. The approach provides the same measure of protection as is present in the existing SRKW critical habitat order, which was developed prior to this policy direction. In both the existing and proposed critical habitat, it is the habitat functions, features, and attributes within the defined areas which are protected against destruction.
Critical Habitat / Whale Watching	DFO	Is the Government planning on prohibiting commercial and recreational whale watching on SRKW in feeding refuges at relevant times of year?	We intend to engage the whale watching sector to collaborate on how best to protect SRKW in feeding refuges and generally.
Whale Watching	DFO	Why is it only 200 m for all killer whales? Why not 400 m?	The only publication referred to in Ecojustice's letter is one by Holt on Sound exposure that cites another one by Bain et al. 2006 wrt the 400m issue. The later shows non-statistical differences of impact

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			of boat presence at different distances from SRKW (100, 200, 400m) on foraging, resting, and socializing. The only statistical difference found was for whale travelling activities at 100m and 400m. However, the 400m component of the study includes boats from 0 to 400m, so one cannot tease out the impact of boats closer to whales (e.g. 100m) from those further away. If only one of the sites is retained, then there was a significant difference in foraging activities when boats were present from 0 to 400m of the whales.
[redacted]			
Prey Availability	DFO	Will there be additional areas designated as foraging areas, like area 20-1?	DFO will review the closures to inform decisions about the role of these closures over the longer term. DFO is also reviewing data available for other fisheries in key foraging areas for SRKW and whether any further steps are necessary to reduce the threat of prey availability in these areas.

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Prey Availability	DFO	What is planned to rebuild Chinook stocks?	*Management actions for Southern BC Chinook:* Additional fishery management measures are in place for 2018 fisheries to address conservation concerns for many BC Chinook Salmon populations. DFO has implemented a precautionary 25% to 35% reduction in exploitation rates for specific Chinook stocks of concern to support conservation and promote rebuilding. The additional reductions are planned to address conservation concerns for all Fraser River Chinook populations (including Spring 4_2, Spring 5_2, Summer 5_2, Summer 4_1, and Fall 4_1) in Southern BC. In addition, the Department is developing an Integrated Strategic Plan to support the recovery and rebuilding of southern BC chinook salmon populations. *New Provisions under the Pacific Salmon Treaty (still to be ratified):* Canadian and U.S. representatives on the Pacific Salmon Commission (PSC) recently concluded the renegotiation of five chapters of the Pacific Salmon Treaty, including Chapter 3 (Chinook). If approved by both countries, the new chapters would be in place for 10 years, beginning January 1, 2019 (through 2028). Negotiations within the PSC considered the important ecosystem role played by Pacific salmon, particularly Chinook. The PSC has recommended a number of changes to the Chinook chapter, including harvest reductions in Canadian and U.S. (Alaskan) fisheries to address conservation concerns for Chinook stocks in both countries. The proposed changes include up to a 7.5% reduction in harvest for the U.S. Southeast Alaska (SEAK) Chinook fishery, which will support conservation and rebuilding of Canadian and U.S.-origin Chinook and may also improve Chinook availability for SRKW. Under the revised Chapter, Canada would also reduce Chinook harvest in the West

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			Coast of Vancouver Island (WCVI) fishery and in some of the inside (Individual Stock Based Management or ISBM) fisheries. These reductions would align with domestic conservation measures for Chinook identified in the 2018/19 Pacific Salmon IFMP and support increased prey availability.
Noise	TC	When will work on quieting vessels commence? What is the timeline for this process?	Work has already started. Internationally, Canada has raised the issue of underwater noise at the International Maritime Organization (IMO) at the last two meetings of the Marine Environment Protection Committee (MEPC) and will do so again at the next meeting in October. Moreover, Canada is convening a domestic and international workshop to critically examine improvements to ship design and propose prescriptive solutions. Other work includes the current voluntary slowdown in Haro Strait and the planned lateral displacement in the Strait of Juan de Fuca. TC is also partnering with BC Ferries to develop a fleet noise management plan that will lead to reduced underwater noise in the long-term. As well, amendments to the Canada Shipping Act are being drafted that, if passed, will give the Minister of Transport improved ability to regulate shipping for the purpose of environmental protection. Work to quiet vessels began more than a year ago and will continue into the foreseeable future.
Noise	TC	What are the details of the noise management plans initiated by BC Ferries? What are the timelines involved and when will changes be implemented?	As announced in the Whales Initiative, the Government is working with BC Ferries to develop a first Underwater Noise Management Plan to reduce underwater noise impacts of its fleet on killer whales. This work is in the initial stages, with BC Ferries drafting a plan.

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			TC is also working to draft a Discussion Document on the concept of Underwater Noise Management Plans for the broader industry. TC will be engaging with stakeholder on this in the fall.
Noise	TC	When will the lateral displacement voluntary measure begin and why isn't it starting sooner?	The 2018 voluntary lateral displacement in SRKW critical habitat is anticipated to begin in August and last until October 31, 2018. This measure is taking time to implement due to several factors: 1. It is in an internationally recognized shipping lane that is governed by existing rules and international conventions. 2. This area is managed by the US Coast Guard so agreement needs to be reached with them before proceeding. 3. Procedures must be drafted to mitigate risks to navigation and safety. 4. Impacts on fishermen and Indigenous communities needs to be addressed. TC has moved quickly to ensure that this measure can be implemented safely and that all affected communities have been able to participate in the planning and have their concerns addressed as much as possible.
Noise	TC	When will voluntary measures for slowdowns in Haro Strait announced on June 22 commence?	The 2018 voluntary slowdown has started. TC is encouraged by the reported 80% participation rate in its first week. The voluntary slowdown period will remain in effect until at least September 15. This year's noise mitigation measures coupled with the Haro Strait slowdown in 2017 are testaments to the success of voluntary measures.
Noise	TC	Please clarify the relationship between ECHO and the federal government and explain why a non-federal agency is responsible for these measures.	TC is an active member of the ECHO program; we work in partnership, and are well aligned, with the members of the Advisory Working Group to advance research and actions on reducing underwater noise.

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

			TC has invested $1.3 M over the last 3 years for various ECHO initiatives, which has been utilized to fund the deployment of the world leading near real-time underwater listening station (ULS) in the Strait of Georgia and support the voluntary slowdown trial last summer, along with other important elements of the program directed at reducing underwater noise in the Salish Sea. Partnering with industry and the scientific community is the best mechanism for ensuring the quickest and most effective actions that result in significant impacts.
New Measures	DFO, TC,	What will the Government do about outstanding requested measures?	The Government of Canada is committed to protecting and conserving the SRKW whale by addressing the identified three key threats. The interplay between the threats means individual measures must be viewed holistically. The measures announced in the Whales Initiative address the key threats in a manner that we expect will allow the SRKW population to recover and meet the goals as set in the Recovery Strategy.
New Measures	DFO, TC,	Will the Government mandate that there will be no net increase in overall noise levels relative to 2016 levels?	The Government of Canada is committed to the protection and recovery of the SRKW population by addressing all of the identified key threats. TC's significant work to reduce underwater noise in the critical habitat and its impacts of reflects this commitment.
New Measures	DFO, TC,	Will the Government develop and adopt a set of noise reduction targets that are biologically relevant and	Work is underway to determine the existing acoustic environment in areas of Critical Habitat. This information may be used to inform future acoustic targets.

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		meaningful to the recovery of SRKW?	
ITA	DFO	When will the Imminent Threat Assessment be available to the public?	The ITA should be available on the Species at Risk public registry within the week.

s.19(1)

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Dozie, Juachi

From: John Durban - NOAA Federal [redacted]
Sent: July-30-18 5:13 PM
To: Joe Gaydos
Cc: brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Hendrik Nollens; Stephen AGRI:EX Raverty; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Kristin Wilkinson - NOAA Federal; Marty Haulena; Betsy Lutmerding
Subject: Re: J50 update - blow sample results from NOAA

Thanks for passing this on Joe. We will provide information as soon as we an, if/when we collect further images. We will arrive on SJI late tomorrow.

Best, J
- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

On Jul 30, 2018, at 5:10 PM, Joseph Karl Gaydos [redacted] wrote:

Kristin Wilkinson

s.21(1)(a)

s.21(1)(b)

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Dozie, Juachi

From: Mar, Amy
Sent: July-30-18 12:41 PM
To: Stadel, Angela
Cc: Thomson, Andrew; Davis, Neil
Subject: RE: FOR INPUT COB July 31: RMC Engagement Look Ahead
Attachments: DFOPacificFallConsultationCoordinationAug2018 AM.ppt

Hi Angela,

I made some updates to slides [redacted] I tried to save to the drive but someone else had it open. Let me know if you have any questions.

Thanks
Amy

From: Stadel, Angela
Sent: July-24-18 2:38 PM
To: Coopper, Tola; Mar, Amy; Cheung, Alice; Leslie, Karen; Davis, Neil; Grout, Jeff; Nener, Jennifer; Creighton, Sheila; Amaya, Libardo; Collie, Tyler; Susnik, Ann; Lamont, Averil; Bonnet, Terri; Harber, Lee; Burgess, Marie; Nantel, Martin; Mah, Jordan; Richardson, Robin; Lavigne, Lauren; Mortimor, James; Cauffope, Genevieve; Gotch, Steve; Payne, Brigid; Heap, David; Watkinson, Stephen; Sterling, Megan
Cc: Ho, Agatha; Russow, Theona; Wong, Cindy; Chin, Jena; Smith, Ken; Wakelin, Amy E; Kelly, Gerry; Conley, Kevin; Spencer, Kent; Parslow, Matthew; Waugh, Bill; Jarvis, Mary Ellen; Stevens, Linda; Stadel, Angela
Subject: FOR INPUT COB July 31: RMC Engagement Look Ahead

Good afternoon,

For the past few years the Consultation Secretariat has presented a look ahead of significant engagement and consultation initiatives for Regional Management Committee (RMC), in an effort to improve coordination opportunities between programs. As part of a progress report on the Pacific Region Action Plan to advance Reconciliation, we plan to provide a fall/winter look ahead of consultation and engagement initiatives to RMC on August 14.

Please review the draft deck and update your respective files on slides 6 through 19 **by July 31, 2018 COB. If you don't see a slide for your program or initiative, please add one. While regular operational programs also involve consultation and engagement, for the purpose of this presentation, please only include any significant new or ongoing policy, project, program or regulatory initiatives.**

In addition to your input to the deck for RMC, we also ask that you input specific dates/activities/events into our Sharepoint calendar throughout the year. This is a tool that all program leads can use to help plan and coordinate engagement activities. Please be as detailed as possible and include location, timing, participants and subject/topic. A complete SharePoint "*How To Manual*" is located here, but please contact Agatha Ho if you have any questions.

Thank you,

Angela Stadel

Manager, Consultations Secretariat, Policy Branch/Pacific Region
Fisheries and Oceans Canada/Government of Canada
angela.stadel@dfo-mpo.gc.ca/ Tel. 604-666-7013

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Gestionnaire, Secrétariat de la consultation, Direction des politiques
Pêches et Océans Canada / Gouvernement du Canada
angela.stadel@dfo-mpo.gc.ca/ Tél. 604-666-7013

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Fisheries and Oceans Canada | Pêches et Océans Canada

Pacific Region Engagement & Consultations Coordination

DRAFT RMC August 14, 2018

Fall/Winter 2018-19

Canada

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Purpose

1. Review key regional/national consultation and engagement initiatives over the next **6-9 months** – timelines, key events and approaches to coordinate through fall/winter.

2. Identify opportunities for coordination of regional consultations and engagement in support of Theme 3 of Pacific Action Plan to advance Reconciliation.

Canada

s.21(1)(a)

s.21(1)(b)

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Context

Significant number of initiatives and increased pressure to deliver on:

- [redacted]
- Key cross sector initiatives: Whales, [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

s.21(1)(a)
s.21(1)(b)

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Fisheries and Oceans Canada | Pêches et Océans Canada

Key Consultation & Engagement Initiatives – *2018/19*

- [redacted]
- [redacted]
- [redacted]
- **Southern Resident Killer Whale** – multiple initiatives
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

(See Annex for further detail on each initiative)

Canada

Pages 1074 to / à 1079

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21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

s.21(1)(a)

s.21(1)(b)

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Fisheries and Oceans Canada | Pêches et Océans Canada

Species at Risk Act: multiple high profile species

Consultation timelines:

[redacted]

Resident Killer Whale critical habitat additions/changes

Regional lead: Karen Leslie

Consultation approach:

•

Resources available:

- O&M from PICFI – requires conversion to G&C
- Consultation Secretariat providing direct support with planning of consultations.

Key linkages:

- WSP implementation plan and Science collaboration work
- Cultural significance and how to engage this in listing decisions.

Canada

001080

Pages 1081 to / à 1088
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

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OPP: *Southern Resident Killer Whale*

Initiative: Seeking public and stakeholder engagement on actions to mitigate threats to Southern Resident Killer Whales

Consultation timelines: Fall 2017 through 2018

Regional lead: Cheryl Webb with support from Lee Harber (FM); Pacific engagement lead: Karen Leslie (EMB - SARP); Pacific science lead: Eddy Kennedy (EOS)

Consultation/Engagement approach:

•

Key linkages:

- Potential for South Coast OPP engagement plan and Marine spatial planning for Salish Sea.
- Other whale related projects (MEQ research, collision avoidance pilot etc.)
- PST renewal and WSP/Cohen – Chinook
- SARA – SRKW Action Plan, update critical habitat in recovery strategy and future listing consultations for salmon.

Canada

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are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

Pages 1093 to / à 1094

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Southern Resident Killer Whale
Indigenous and Multi-stakeholder Advisory Group

Terms of Reference

(DRAFT July 19, 2018)

1. BACKGROUND

As identified at the October 2017 Symposium for the Southern Resident killer whale (SRKW) and the recent *Whales Initiative* technical briefing and roundtable discussion on June 22, 2018, this Advisory Group has been established by the federal departments of Fisheries and Oceans Canada, Transport Canada, and Environment and Climate Change Canada to bring together Indigenous groups, multiple stakeholders, and implicated jurisdictions to facilitate communication and coordination of activities to recover SRKW.

This advisory group does not replace the Crown's Duty to Consult and accommodate nor does it replace the regular engagement and consultation on individual initiatives and measures related to SRKW recovery.

2. PURPOSE

To facilitate communication and coordination of activities to recover SRKW and provide recommendations to federal departments of Fisheries and Oceans Canada, Transport Canada and Environment and Climate Change Canada on implementation of coordinated recovery measures.

3. OBJECTIVES

The main objectives of the advisory group will be to:

a. Provide a forum for the participants to discuss actions underway and planned by federal departments and others to protect SRKW, and to allow participants to provide advice on recovery actions and to share information to help inform government decision-making.

b. Promote dialogue and improve shared understanding of the complexities of SRKW recovery, shared responsibilities, and respective authorities of Advisory Group participants to reduce SRKW threats.

c. Identify opportunities for collaboration and partnership that can advance the collective implementation of the recovery measures identified in the Species at Risk *Action Plan for Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada* (2017) and Oceans Protection Plan *Review of the Effectiveness of Recovery Measures for Southern Resident Killer Whales* (2017), and the measures announced under the federal *Whales Initiative* on June 22, 2018 to promote recovery of the species.

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Discussion question: Are there specific milestones or deliverables that you would like to identify under these objectives?

4. GOVERNANCE AND MEMBERSHIP

The Indigenous and Multi-stakeholder Advisory Group will consist of representatives from various Indigenous and stakeholder groups: indigenous communities, Non-Governmental Organizations (NGO), the shipping and marine transportation, fishing, and whale watching sectors, the Government of British Columbia, and Metro Vancouver Regional District.

The Advisory Group will be chaired by the Regional Director General of Fisheries and Oceans Canada (DFO), with ex-officio participation of senior officials from DFO, Transport Canada, and Environmental and Climate Change Canada.

Discussion question: Is there interest is having a non-federal co-chair and if yes then how would a non-federal co-chair be selected?

Any decisions on changes to membership will be decided by the chair/co-chairs with input from members of the Advisory Group.

The Advisory Group secretariat will report out on the discussions that were held and the recommendations made, noting the degree of support or divergence among members for advice on different issues.

The Advisory Group will refer to other existing technical committees and working groups as needed to address technical questions and issues. Should a gap be identified, the federal departments may consider establishing a technical sub-advisory group.

Discussion question: Is there interest in having a sub-advisory group? If so, what type of function would this group serve? E.g. science advice, traditional uses advice, socioeconomic analysis, etc.

5. RESPONSIBILITIES OF PARTICIPANTS

Review circulated information.

Participate in meetings or assign alternate to attend.

Engage in open and respectful dialogue, seeking to understand and be understood.

Communicate out to their respective organizations/communities the activities and outcomes of this Advisory Group.

6. MEETING PROCESS

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The Advisory Group is anticipated to meet quarterly, however this may be adjusted by the chair/co-chair, if needed. Teleconferencing and video conferencing will be used where possible to minimize travel demands.

Discussion question: How often should this group meet?

Federal departments will provide secretariat services to support meeting delivery and the preparation of summary meeting notes.

Advisory group participants will be invited to propose topics for future meetings. Agendas will be approved by the chair/co-chair.

Discussion question: What do you feel should be a priority topic on future agenda's?

7. REPORTING

The Chair will disseminate meeting summary notes through the federal secretariat to this Advisory Group.

Individual participants of this Advisory Group will also report back to their respective organizations.

The Chair/secretariat will provide draft meeting summary notes that include a record of recommendations and follow up actions to all participants within two weeks of the meeting. The Advisory Group will have 2 weeks to review summary notes prior to their finalization.

8. LINKAGES

The Advisory Group may be informed and advised by other various and already established SRKW working groups and committees, which are generally threat-based. A list of other currently active groups is provided at Annex B.

Discussion Question: Are there other relevant or related working groups or discussion forums that should be included in this table?

9. FUNDING

The Federal Government has allocated an annual budget to support the Advisory Group.

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Annex A: Participant List

Sector	Name	Position	Affiliation	E-mail
Indigenous representatives			UBC	
			First Nations Summit	
			FNFC	
			FNFC	
			FNFC	
NGOs			Raincoast Conservation Foundation	
			Georgia Strait Alliance	
			WWF Canada	
			David Suzuki Foundation	
			Natural Resources Defence Council	
			Vancouver Aquarium [Oceans Wise / CORI Team]	
Shipping Industry			Port of Vancouver	
			Shipping Federation of Canada	
			Chamber of Shipping	
			Canadian Ferry Association	
Fishing Industry			Sport Fishing Advisory Board	
			BC Seafood Alliance	
Whale Watching			Pacific Whale Watching Association	
Provincial	Mark Zacharias	Deputy Minister	Ministry of	Mark.Zacharias@gov.bc.ca

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s.19(1)

Government			Environment and Climate Change Strategy	
Municipal Government			City of Vancouver	
Federal government	Rebecca Reid	Regional Director General, Pacific Region	DFO	Rebecca.Reid@dfo-mpo.gc.ca
	Carmel Lowe	Regional Director, Science, Pacific Region Science	DFO	Carmel.Lowe@dfo-mpo.gc.ca
	Andy Thomson	Regional Director, Fisheries Management	DFO	Andrew.Thomson@dfo-mpo.gc.ca
	Sylvie Lapointe	ADM, Fisheries and Harbours Management	DFO	Sylvie.Lapointe@dfo-mpo.gc.ca
	Michelle Sanders	Director, Clean Water Policy	TC	Michelle.Sanders@tc.gc.ca
	Megan Nichols	Director General, Environmental Policy	TC	Megan.Nichols@tc.gc.ca
	Yvette Myers	Executive Director, Oceans Protection Plan	TC	Yvette.Myers@tc.gc.ca
	Marc D'Iorio	DG, Industrial Sectors, Chemicals, and Waste Directorate	ECCC	Marc.diorio@canada.ca
	Cecilia Wong	Senior Ecosystem Scientist	ECCC	cecilia.wong@canada.ca

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Pages 1100 to / à 1115

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s.21(1)(a)

s.21(1)(b)

Items / Issues for Consideration:

[redacted]

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1. **Approvals**: do DGs and Regional Directors need to seek more senior approvals on elements of the Jul 30 meeting plan?

SRKW multi-stakeholder and Indigenous Advisory Group - Timeline and Approval Process

	Item	Dept.	Deadline
1	Secretariat (DFO, TC, ECCC) review of: • Draft Terms of Reference • June 22 meeting summary report & assigned questions • Meeting Agenda	All departments	July 17 (Tuesday)
2	Call with interdepartmental executive group (DG / Director – Regional Director level)	DFO: Andy Thomson (Chair), Neil Davis & Cheryl Webb ECCC: Marc D'Iorio TC: Michelle Sanders (NHQ) / Yvette Myers (PAC)	July 20 (Friday AM)
3	DFO Pacific to send out updated materials to Departments based on direction from DG meeting.	DFO Pacific Region	July 20 (Friday PM)
4	Check-in with RDG Pacific Region	DFO Pacific Region	July 23 (Monday)
5	Approval of meeting materials by respective departments senior officials i.e. DG level	All departments	July 24 (Tuesday)
6	Finalize materials and send to meeting package to participants	DFO Pacific Region	July 25 (Wednesday)
7	Pre-brief with RDG Pacific Region	DFO Pacific Region	July 27 (Friday)
8	SRKW Indigenous and Multi-Stakeholder Advisory Group Meeting	All departments	July 30 (Monday)

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s.16(2)

s.21(1)(a)

s.21(1)(b)

Dozie, Juachi

From: Harber, Lee
Sent: July-24-18 12:40 PM
To: Bate, Dan
Cc: Davis, Neil; Thomson, Andrew
Subject: RE: SRKW speech - Monday July 30
Attachments: Draft Agenda for July 30 mtgV6.docx; participant list - July 30.docx; SRKW Indigenous and Multi-stakeholder Advisory Group DRAFT TOR V8.docx

Hi Dan,

It is an Indigenous and multi-stakeholder advisory group (participant list attached). We have also developed a draft ToR (attached), agenda (attached), and report from the June 22 technical briefing/round-table that was held post Whales Initiative Announcement in Vancouver. There will be several updates from federal departments at the meeting on recovery measures being implemented, review of ToR and also a discussion what the priority areas are for discussion at future meetings.

Happy to provide more info / discuss just let me know what you need.

lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

From: Bate, Dan
Sent: 2018–July-24 12:23 PM
To: Harber, Lee
Subject: SRKW speech - Monday July 30

Hi Lee – Andy came to chat with me about an upcoming SRKW meeting on Monday morning

Can you share details of this meeting.. is it stakeholders and program?

Dan

Dan Bate

A/Regional Director, Communications
Fisheries and Oceans Canada Pacific Region / Canadian Coast Guard / Government of Canada
Dan.Bate@dfo-mpo.gc.ca / Tel: (604) 775-8809 / Cell: 604-209-6225

A/Directeur régional des communications
Pêches et Océans Canada, région du Pacifique / Garde côtière canadienne / Gouvernement du Canada
Dan.Bate@dfo-mpo.gc.ca / Tél : (604) 775-8809 / Tél. cell. : 604-209-6225

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SOUTHERN RESIDENT KILLER WHALES
INDIGENOUS AND MULTI-STAKEHOLDER ADVISORY GROUP

AGENDA – [Internal - Annotated]

Monday July 30, 2018 9:30 am- 12:30 pm
Location: 401 Burrard St. Room
2nd Floor, Boardroom C and D

Time	Agenda Item	Objective & Materials	Presenter(s)
9:30AM – 9:45AM *(15 mins)*	**Welcome, Opening Remarks & Introductions** • Opening Remarks • Review Agenda • Ratify Summary Report from first meeting	Materials: 1. Draft Agenda 2. Speaking points	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region
9:45AM-10:45AM *(1.5 hours)*	**Updates / Recent Developments** 1. Update on amended Marine Mammal regulations 2. Update on proposed New Critical Habitat under Amended RKW recovery strategy 3. Lateral Displacement in Strait of Juan de Fuca / Vessel Slow Down in Haro Strait 4. Science Activities 5. Other updates (non-federal) 6. Opportunity for participants to provide other updates.	Materials: 1. PowerPoint Presentations with Speaking Point for Presenters on each of the updates. 2. Hand-out's on updates	Update 1: Andy Thomson, Regional Director, Fisheries Management, DFO Update 2: Cheryl Webb, Regional Director, Ecosystem Management, DFO Update 3: Michelle Sanders, A/Director General, Environmental Policy, TC and ECHO Update 4: Carmel Lowe, Regional Director, Science, DFO
10:45AM-12:15PM *(1 hour)*	**Review draft Terms of Reference** **Discuss Forward Agenda** Areas for consideration: 1. Compliance with recovery Measures 2. Setting Targets (short & long term) 3. Updates from federal departments on measures being implemented to address key threats (DFO/TC/ECCC) 4. Other areas of interest identified by participants	Objective: Review draft Terms of Reference & discussion a priority areas for discussion in supporting the establishment of a forward agenda Materials: 1. Draft Term of Reference 2. Presentation on forward agenda discussion (provided at the meeting)	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region Discussion with input from all participants
12:15AM – 12:30PM *(15 mins)*	**Closing Remarks** ○ Next Steps ○ Action Items	Objectives: Identify next steps & action items	**Chair: Rebecca Reid** Regional Director General, DFO – Pacific Region

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Southern Resident Killer Whale

Indigenous and Multi-stakeholder Advisory Group

Terms of Reference

(DRAFT July 23, 2018)

1. BACKGROUND

As identified at the October 2017 Symposium for the Southern Resident killer whale (SRKW) and the recent *Whales Initiative* technical briefing and roundtable discussion on June 22, 2018, this Advisory Group has been established by the federal departments of Fisheries and Oceans Canada, Transport Canada, and Environment and Climate Change Canada to bring together Indigenous groups, multiple stakeholders, and implicated jurisdictions to facilitate communication and coordination of activities to recover SRKW.

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2. OBJECTIVES

The main objectives of the advisory group will be to:

a. Provide a forum for the participants to discuss actions underway and planned by federal departments and others to protect SRKW, and to allow participants to provide advice on recovery actions and to share information to help inform government decision-making.

b. Promote dialogue and improve shared understanding of the complexities of SRKW recovery, shared responsibilities, and respective authorities of Advisory Group participants to reduce SRKW threats.

c. Identify opportunities for collaboration and partnership that can advance the collective implementation of the recovery measures identified in the Species at Risk *Action Plan for Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada* (2017) and Oceans Protection Plan *Review of the Effectiveness of Recovery Measures for Southern Resident Killer Whales* (2017), and the measures announced under the federal *Whales Initiative* on June 22, 2018 to promote recovery of the species.

> *Discussion question: Are there specific milestones or deliverables that you would like to identify under these objectives?*

3. GOVERNANCE AND MEMBERSHIP

The Indigenous and Multi-stakeholder Advisory Group will consist of representatives from various Indigenous and stakeholder groups: indigenous communities, Non-Governmental Organizations (NGO), the shipping and marine transportation, fishing, and whale watching sectors, the Government of British Columbia, and Metro Vancouver Regional District.

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The Advisory Group will be chaired by the Regional Director General of Fisheries and Oceans Canada (DFO), with ex-officio participation of senior officials from DFO, Transport Canada, and Environmental and Climate Change Canada.

The Advisory Group secretariat will report out on the discussions that were held and the recommendations made, noting the degree of support or divergence among members for advice on different issues.

If a member of the Advisory Group is unable to attend a meeting an alternate participant may attend on their behalf. Additional observers are welcome to listen to discussions however participation is limited to members or designated alternates.

The Advisory Group will refer to other existing technical committees and working groups as needed to address technical questions and issues. If, through discussion, a need or gap is identified, the Advisory Group may consider establishing supporting technical groups for specific purposes.

4. RESPONSIBILITIES OF PARTICIPANTS

Review circulated information.

Participate in meetings or assign alternate to attend.

Engage in open and respectful dialogue, seeking to understand and be understood.

Communicate out to their respective organizations/communities the activities and outcomes of this Advisory Group.

5. MEETING PROCESS

The Advisory Group is anticipated to meet up to 4 times per year however this may be adjusted by the chair, if needed. Teleconferencing and video conferencing will be used where possible to minimize travel demands.

Discussion question: How often should this group meet?

Federal departments will provide secretariat services to support meeting delivery and the preparation of summary meeting notes.

Advisory group participants will be invited to propose topics for future meetings. Agendas will be approved by the chair.

Discussion question: What do you feel should be a priority topic on future agendas?

6. REPORTING

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The Chair will disseminate meeting summary notes through the federal secretariat to this Advisory Group.

Individual participants of this Advisory Group will also report back to their respective organizations.

The Chair/secretariat will provide draft meeting summary notes that include a record of recommendations and follow up actions to all participants within two weeks of the meeting. The Advisory Group will have 2 weeks to review summary notes prior to their finalization.

7. LINKAGES

The Advisory Group may be informed and advised by other various and already established SRKW working groups and committees, which are generally threat-based. A list of other currently active groups is provided at Annex B.

> *Discussion Question: Are there other relevant or related working groups or discussion forums that should be included in this table?*

DRAFT

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Annex A: Participant List

Sector	Name	Position	Affiliation	E-mail
Indigenous representatives			UBC	
			First Nations Summit	
			FNFC	
			FNFC	
			FNFC	
NGOs			Raincoast Conservation Foundation	
			Georgia Strait Alliance	
			WWF Canada	
			David Suzuki Foundation	
			Natural Resources Defence Council	
			Vancouver Aquarium [Oceans Wise / CORI Team]	
Shipping Industry			Port of Vancouver	
			Shipping Federation of Canada	
			Chamber of Shipping	
			Canadian Ferry Association	
Fishing Industry			Sport Fishing Advisory Board	
			BC Seafood Alliance	
Whale Watching			Pacific Whale Watching Association	

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Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca
Municipal Government			City of Vancouver	
Federal government	Rebecca Reid	Regional Director General, Pacific Region	DFO	Rebecca.Reid@dfo-mpo.gc.ca
	Carmel Lowe	Regional Director, Science, Pacific Region Science	DFO	Carmel.Lowe@dfo-mpo.gc.ca
	Andy Thomson	Regional Director, Fisheries Management	DFO	Andrew.Thomson@dfo-mpo.gc.ca
	Sylvie Lapointe	ADM, Fisheries and Harbours Management	DFO	Sylvie.Lapointe@dfo-mpo.gc.ca
	Michelle Sanders	Director, Clean Water Policy	TC	Michelle.Sanders@tc.gc.ca
	Megan Nichols	Director General, Environmental Policy	TC	Megan.Nichols@tc.gc.ca
	Yvette Myers	Executive Director, Oceans Protection Plan	TC	Yvette.Myers@tc.gc.ca
	Marc D'Iorio	DG, Industrial Sectors, Chemicals, and Waste Directorate	ECCC	Marc.diorio@canada.ca
	Cecilia Wong	Senior Ecosystem Scientist	ECCC	cecilia.wong@canada.ca

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Annex B: Existing Working Groups/Committees			
Name of engagement activity	**Description**	**Purpose**	**Contact Person**
SRKW committee	Developed from need to have more engagement with First Nations and stakeholders around management measures for SRKW to reduce threat of prey availability and secondarily disturbance	ToR being drafted; but generally provide for engagement with First Nations and Stakeholders to discuss and get input on management actions for SRKW related to abating threat of reduced prey availability	
Canada-United States			
Toxics Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. Toxics working group formed as one of the three to support the Task Force.	Identify, research, and analyze potential actions for consideration.	
Vessels and Noise Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. The Working Group on Vessels and Noise reports to the Washington State Southern Resident Killer Whale Task Force	To develop recommendations on actions to reduce physical and acoustic disturbance impacting SRKW.	
Prey Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of	Identify range of actions to be considered to abate threat of reduced prey availability within Habitat, Harvest, Hydro, Hatcheries, Predations; prioritize, identify conflicts and synergies and deliver refined set of actions to Task Force to be considered in	

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	Southern Residents and necessary to secure a healthy and sustained population for the future. Prey working group formed as one of three to support the Task Force.	final report due Nov.1 2018	
Salish Sea Transboundary Ecosystem Indicators (TBI) Project	The TBI project is led by Environment and Climate Change Canada (ECCC) and the United States Environmental Protection Agency (US EPA) to characterize the state of ecosystem health in the Salish Sea (overlaps with SRKW critical habitat) and convene subject experts to identify threats and responses to concerning trends. Ten indicators are tracked including SRKW abundance, toxics in the food web and chinook abundance. A public facing website supports communication of project outcomes.	The TBI project is a commitment under the ECCC - US EPA Statement of Cooperation to share information and foster collaboration on priority issues in the Salish Sea ecosystem.	
DFO/ National Oceanic and Atmospheric Administration prey working group	Group that has organized workshops to review and understand the science on prey availability for SRKW and identify potential management action.		
SRKW and Underwater Vessel Noise			
Enhancing Habitat Cetacean Observation (ECHO) Advisory Working Group (AWG)	The ECHO AWG brings together a broad spectrum of interests from Canada and US to address threats to at-risk whales.	The role of the AWG is to provide the ECHO program management team with input, advice and recommendations during the development and execution of the program's projects and initiatives.	
Enhancing Habitat Cetacean Observation (ECHO) Vessel Operators Committee (VOC)	The ECHO VOC was established in December 2016 to provide the ECHO Program team with advice, support and guidance pertaining to potential mitigation options that may directly impact the shipping industry.	To bring key stakeholders together to develop mitigation options to reduce underwater vessel noise	
Ship Noise Mitigation Risk Assessment	The Ship Noise Mitigation Risk Assessment was commissioned by Transport Canada to assess and quantify the navigation safety risks associated with introducing or	The purpose of the stakeholder engagement sessions was to present the results of the TC commissioned risk assessment, and seek feedback	

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	implementing potential mitigation measures to address underwater noise in the Salish Sea.	from key industry stakeholders, First Nations and US Tribes in the Salish Sea region.	

*** While the Government of Canada is actively participating in the sub-working groups in terms of information sharing and identifying opportunities for collaborations, it is only an observer on the Task Force and will not be part of recommendations made to the Governor.**

DRAFT

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Sector	Name	Position	Affiliation	E-mail
Indigenous representatives	[redacted]	[redacted]	UBC	[redacted]
			First Nations Summit	
			FNFC	
			FNFC	
			FNFC	
NGOs			Raincoast Conservation Foundation	
			Georgia Strait Alliance	
			WWF Canada	
			David Suzuki Foundation	
			Natural Resources Defence Council	
			Vancouver Aquarium [Oceans Wise / CORI Team]	
Shipping Industry			Port of Vancouver	
			Shipping Federation of Canada	
			Chamber of Shipping	
			Canadian Ferry Association	
Fishing Industry			Sport Fishing Advisory Board	
			BC Seafood Alliance	
Whale Watching			Pacific Whale Watching Association	
Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca

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Municipal Government			Metro Vancouver Regional District	
Federal government	Rebecca Reid	Regional Director General, Pacific Region	Fisheries and Oceans Canada	Rebecca.Reid@dfo-mpo.gc.ca
Federal government	Carmel Lowe	Regional Director, Science, Pacific Region Science	Fisheries and Oceans Canada	Carmel.Lowe@dfo-mpo.gc.ca
Federal government	Andy Thomson	Regional Director, Fisheries Management	Fisheries and Oceans Canada	Andrew.Thomson@dfo-mpo.gc.ca
Federal government	Sylvie Lapointe	ADM, Fisheries and Harbours Management	Fisheries and Oceans Canada	Sylvie.Lapointe@dfo-mpo.gc.ca
Federal government	Michelle Sanders	Director, Clean Water Policy	Transport Canada	Michelle.Sanders@tc.gc.ca
Federal government	Megan Nichols	Director General, Environmental Policy	Transport Canada	Megan.Nichols@tc.gc.ca
Federal government	Yvette Myers	Executive Director, Oceans Protection Plan	Transport Canada	Yvette.Myers@tc.gc.ca
Federal government	Marc D'iorio	DG, Industrial Sectors, Chemicals, and Waste Directorate	Environment and Climate Change Canada	Marc.diorio@canada.ca
Federal Government	Cecilia Wong	Senior Ecosystem Scientist	Environment and Climate Change Canada	cecilia.wong@canada.ca
Federal Government	Helen Davies	Field Unit Superintendent Coastal BC	Parks Canada	Helen.Davies@pc.gc.ca

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s.21(1)(a)

s.21(1)(b)

s.23

Khanna, Sukriti

From: Brekke, Heather
Sent: August-29-18 11:08 AM
To: Webb, Cheryl
Subject:
Attachments:

From: Davidson, Peter [mailto:Peter.Davidson@justice.gc.ca]
Sent: August-29-18 8:11 AM
To: Stewart, Julie; Legault, Josee (DOJ)
Cc: Brekke, Heather; Poliquin, André; Thorleifson, Erika; Chiu, Scott; Beaton, Heather (DOJ); Ross, Peter (DOJ)
Subject: RE:

Hi Julie –

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[redacted]

Peter Davidson and Peter Ross

From: Stewart, Julie [mailto:Julie.Stewart@dfo-mpo.gc.ca]
Sent: Thursday, August 16, 2018 3:33 PM
To: Legault, Josée <Josee.Legault@justice.gc.ca>
Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Poliquin, André <Andre.Poliquin@dfo-mpo.gc.ca>; Thorleifson, Erika <Erika.Thorleifson@dfo-mpo.gc.ca>; Chiu, Scott <Scott.Chiu@dfo-mpo.gc.ca>; Davidson, Peter <Peter.Davidson@justice.gc.ca>; Beaton, Heather <Heather.Beaton@justice.gc.ca>
Subject: RE: [redacted]

[redacted]

Julie Stewart
Director / Directrice
Species at Risk Program / Programme des Espèces en Péril
200 rue Kent St.
Station 10W061
Ottawa, ON
K1A 0E6

(613) 949-7524 (t)
[redacted] (c)

Julie.stewart@dfo-mpo.gc.ca

From: Legault, Josée <Josee.Legault@justice.gc.ca>
Sent: Thursday, August 16, 2018 3:05 PM
To: Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>
Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Poliquin, André <Andre.Poliquin@dfo-mpo.gc.ca>; Thorleifson, Erika <Erika.Thorleifson@dfo-mpo.gc.ca>; Chiu, Scott <Scott.Chiu@dfo-mpo.gc.ca>; Davidson, Peter (DOJ)

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<peter.davidson@justice.gc.ca>; Beaton, Heather (DOJ) <Heather.Beaton@justice.gc.ca>
Subject: RE: [redacted]

Julie,

Thanks for this. [redacted]

[redacted]

Thanks.

Josée

PROTECTED / SOLICITOR-CLIENT PRIVILEGE
SECRET PROFESSIONNEL DES AVOCATS

Josée Legault
Avocate générale / General Counsel
Ministère de la Justice du Canada / Department of Justice Canada
Services juridiques / Legal Services
Pêches et Océans Canada - Fisheries and Oceans Canada
200 Kent, Ottawa K1A 0E6
Tél. / tel.: (613) 990-2291
Téléc. / fax: (613) 990-9385
Josée.Legault@justice.gc.ca

From: Stewart, Julie [mailto:Julie.Stewart@dfo-mpo.gc.ca]
Sent: Wednesday, August 15, 2018 7:41 PM
To: Legault, Josée <Josee.Legault@justice.gc.ca>
Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Poliquin, André <Andre.Poliquin@dfo-mpo.gc.ca>; Thorleifson,

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Erika <Erika.Thorleifson@dfo-mpo.gc.ca>; Chiu, Scott <Scott.Chiu@dfo-mpo.gc.ca>; Davidson, Peter <Peter.Davidson@dfo-mpo.gc.ca>

Subject:

Josee:

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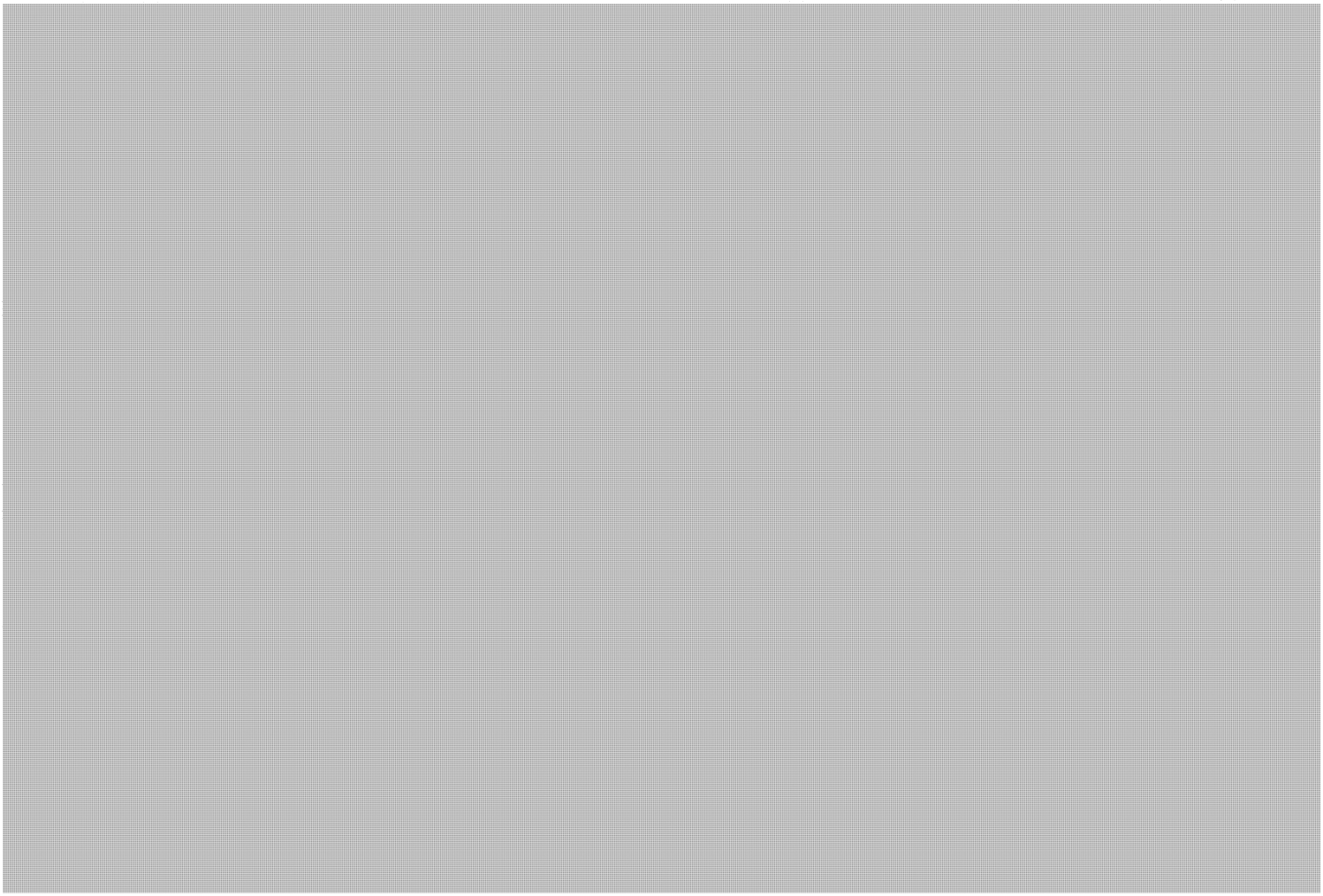

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Director / Directrice
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200 rue Kent St.
Station 10W061
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K1A 0E6

(613) 949-7524 (t)
(c)

Julie.stewart@dfo-mpo.gc.ca

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Subject: [redacted]
Importance: High

Hello Peter,

[redacted]

Thank you in advance,

Lisa

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

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Dozie, Juachi

From: Kenneth Balcomb III <[redacted]
Sent: July-31-18 10:07 AM
To: Nollens, Hendrik
Cc: Joseph Karl Gaydos; John Durban; brad.hanson@noaa.gov Hanson; Mike Ford; Candice Emmons; Lynne Barre; Steve Raverty; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Jim McBain; Lance Barrett-Lennard; Director Marine Mammal; Kristin Wilkinson; Marty Haulena; Betsy Lutmerding
Subject: Re: [EXTERNAL] J50 update - blow sample results from NOAA

We at CWR are occasionally monitoring and photographing J50's condition, but only at several day intervals. She is showing gradually more "peanut head" recently. All of the WW boats are giving a very wide berth to her and family, and so are we, except for the monitoring episodes which last a few minutes. I did not hear of any decision to boat follow her, nor any to intervene. She is still traveling with her mother.
Ken

On Jul 31, 2018, at 8:59 AM, Nollens, Hendrik <[redacted] wrote:

Did the team end up deciding to do some boat follows of J50, whether to get more detailed observations or while in the process of getting fecal and blow samples? If so, I can put together a first draft of a list of observations or parameters to document opportunistically.
--Hendrik.

From: Joseph Karl Gaydos [mailto:j[redacted]
Sent: Monday, July 30, 2018 5:10 PM
To: John Durban; Brad Hanson; Mike Ford; Candice Emmons; Lynne Barre; Kenneth Balcomb; Nollens, Hendrik; Steve Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Director Marine Mammal; Kristin Wilkinson; Marty Haulena; Betsy Lutmerding
Subject: [EXTERNAL] J50 update - blow sample results from NOAA

Dear Colleagues,

Linda Rhodes (copied here) recently analyzes the J50 breath sample that Brad Hanson (also copied) collected a week ago. May thanks to Brad for getting the sample and for Linda for analyzing it so fast. Here is what Linda reports (Note: Bold is my emphasis):

> The breath samples from J50 from last Saturday yielded a tiny amount of DNA. There was enough to only do a couple of PCRs, so I used a pan-bacterial & a pan-fungal set of reactions. Those produced fairly clean-looking results, so we tried to sequence the products. Of the 4 sequencing sets, only one appeared to be a result of a dominant pathogen; the other 3 must have had a mixture of bacteria or fungi present, which produces mixed sequences that can't be separated from each other.
>
> The one reliable sequence was best matched to a fungal genus, *Exophiala* (Ascomycetes). Like most fungi, the genus is widely present in the environment (especially wood & soil) but is a

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known opportunistic pathogen of humans & even fish. It can infect both the skin & the respiratory system.

From one of the sub-optimal sequence sets, there was a match to *Cladosporium*, a fungal genus that was frequently detected by culture in SRKW breath (Table 1 of Raverty et al 2017). It's not a well demonstrated pathogen

Based on these scant results, it's not convincing that J50 has a respiratory infection due to bacteria or fungus, because we can't rule out an environmental contaminant. Getting more breath material could help decide whether an infectious agent is part of J50's problem, but obviously in concert with assessing other possible things affecting her health.

In summary - Linda did not find evidence that supports an overwhelming pneumonia caused by a bacteria or fungus.

I spoke to Kristin Wilkinson today and updated her on our phone call last week. Based on these results and the fact that John and Holly might have some photogrammetry results soon, she thought it might be good for us to all check back in together later this week and plans to send around a conference call line soon to discuss recent findings and potential next steps.

Best,
JOE

Joseph K. Gaydos
360-376-3910
[redacted]
www.seadocsociety.org

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Dozie, Juachi

From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: July-31-18 6:38 AM
To: 'Joseph Karl Gaydos'
Cc: Hendrik Nollens; Raverty, Stephen AGRI:EX
Subject: RE: J50 update - blow sample results from NOAA

Hi Joe,

[redacted] I have reservations with regards to the interpretation of the findings for J50, particularly with the clinical signs, including occasional detection of fetid breath. At this stage, pneumonia should not yet be entirely ruled out and ideally cytology should be pursued to assess if there is evidence of an inflammatory/infectious process.
Thank you for the update
Stephen

From: Joseph Karl Gaydos [mailto[redacted]
Sent: Monday, July 30, 2018 5:10 PM
To: John Durban; Brad Hanson; Mike Ford; Candice Emmons; Lynne Barre; Kenneth Balcomb; Hendrik Nollens; Raverty, Stephen AGRI:EX; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Director Marine Mammal; Kristin Wilkinson; Marty Haulena; Betsy Lutmerding
Subject: J50 update - blow sample results from NOAA

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>
> The one reliable sequence was best matched to a fungal genus, *Exophiala* (Ascomycetes). Like most fungi, the genus is widely present in the environment (especially wood & soil) but is a known opportunistic pathogen of humans & even fish. It can infect both the skin & the respiratory system.
>
> From one of the sub-optimal sequence sets, there was a match to *Cladosporium*, a fungal genus that was frequently detected by culture in SRKW breath (Table 1 of Raverty et al 2017). It's not a well demonstrated pathogen
>
> **Based on these scant results, it's not convincing that J50 has a respiratory infection due to bacteria or fungus, because we can't rule out an environmental contaminant. Getting more breath material could help decide whether an infectious agent is part of J50's problem, but obviously in concert with assessing other possible things affecting her health.**

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In summary - Linda did not find evidence that supports an overwhelming pneumonia caused by a bacteria or fungus.

I spoke to Kristin Wilkinson today and updated her on our phone call last week. Based on these results and the fact that John and Holly might have some photogrammetry results soon, she thought it might be good for us to all check back in together later this week and plans to send around a conference call line soon to discuss recent findings and potential next steps.

Best,
JOE

Joseph K. Gaydos
360-376-3910
[redacted]
www.seadocsociety.org

s.19(1)

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Dozie, Juachi

From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: July-31-18 11:57 AM
To: Cottrell, Paul
Subject: FW: [EXTERNAL] J50 update - blow sample results from NOAA

From: Joseph Karl Gaydos [mailto:
Sent: Tuesday, July 31, 2018 9:48 AM
To: Raverty, Stephen AGRI:EX
Cc: Hendrik Nollens
Subject: Re: [EXTERNAL] J50 update - blow sample results from NOAA

Hi Steve and Hendrik,

All good points and sorry for overstepping any interpretation of her results.
It would be good to bring this up on the next call. Kristin Wilkinson is going to organize a call for Thursday I think. Stay tuned.

best,
JOE

Joseph K. Gaydos
360-376-3910
www.seadocsociety.org

On Jul 31, 2018, at 8:13 AM, Raverty, Stephen AGRI:EX <stephen.raverty@gov.bc.ca> wrote:

Hendrik
Thank you, as you may know, 48% of necropsied wild kw have evidence of pneumonia and in 24% of cases, this process was the coup de grace
S

From: Nollens, Hendrik [mailto:
Sent: Tuesday, July 31, 2018 8:08 AM
To: Joseph Karl Gaydos; Raverty, Stephen AGRI:EX
Subject: FW: [EXTERNAL] J50 update - blow sample results from NOAA
Hi Joe,
I have to second Stephen's opinion here. We should be careful how this is translated to the biologists on the team. The microbiomics work is great as a research tool. It may even tell you that a whale has an unusual microbiomic "signature", but we should not use that data to rule in or out pneumonia. The Navy published a paper showing that blow cultures do not correlate with the BAL/post-mortem cultures. This microbiomics work is a little different in that it doesn't skew results towards what can grow on a petri dish, but I have the same reservations for now.
Subjectively, I think J50's weight loss is due to illness and not due to acute starvation. Sick cetaceans are very prone to pneumonia.
--HN.

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From: Joseph Karl Gaydos [mailto:
Sent: Monday, July 30, 2018 5:10 PM
To: John Durban; Brad Hanson; Mike Ford; Candice Emmons; Lynne Barre; Kenneth Balcomb; Nollens, Hendrik; Steve Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Director Marine Mammal; Kristin Wilkinson; Marty Haulena; Betsy Lutmerding
Subject: [EXTERNAL] J50 update - blow sample results from NOAA

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Best,
JOE

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s.19(1)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: July-31-18 1:04 PM
To: Leslie, Karen
Subject: Re: southern orcas

Hi Mike,
[redacted] Steveston crew were on this group of whale watchers at the very time this fellow inferred there was a violation. I was also out there. There were a couple warnings I believe to recreational vessels but overall the commercial whale watcher fleet was very well behaved maintaining a voluntary buffer of 400 meters away when J35 and/or J50 were present. It would be interesting if they got pictures or video. Both strait watch and sound watch were also present (stewardship/education groups funded by DFO/NOAA). Overall there was great coverage from my perspective so not sure they are correct in this case. I left just before the whales rounded East Point but [redacted] Strait watch and sound watch were still present. [redacted] will have details for you. I think they even got a rockfish over limit violation from one of the recreational vessels they talked to about their boating behaviour in the presence of whales. Thought I would let you know.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Leslie, Karen
Sent: Tuesday, July 31, 2018 12:22 PM
To: Carlson, Mike
Cc: Cottrell, Paul; Davis, Neil; Chiu, Scott
Subject: FW: southern orcas

Hi Mike -

We received this email to our national SARA inbox. Forwarding to you for your consideration and possible delegation.

Cheers,
Karen

Karen Leslie
Regional Manager, Species at Risk Program Fisheries and Oceans Canada / Government of Canada Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

Gestionnaire régional, Programme des espèces en péril Pêches et Océans Canada / Gouvernement du Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

-----Original Message-----
From: Chiu, Scott On Behalf Of NCR SARA / LEP RCN (DFO/MPO)
Sent: 2018–July-31 12:02 PM
To: Leslie, Karen
Subject: FW: southern orcas

Reporting of possible violation of whale buffer zone.

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-----Original Message-----
From: [redacted]
Sent: July-30-18 7:39 PM
To: NCR SARA / LEP RCN (DFO/MPO)
Subject: southern orcas

this afternoon i observed a whale watching ship named [redacted] deliberately cutting into the middle of a large pod of orcas immediately sw of saturna island. The ship had chased the whales around EastPoint, Saturna Island and was perhaps 5 meters from one and 10 from the other
of the two closest whales. there is not much point in making rules and
action plans if there is no enforcement of same. A large number of whale watching ships converged on the whales and while some appeared to be observing from a distance others very definitely were not (people from various of these boats were heard shouting angrily at each other) Why no meaningful enforcement?

This email has been checked for viruses by AVG.
https://www.avg.com

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Dozie, Juachi

From: Jones, Lisa Ann
Sent: July-31-18 8:18 AM
To: Nener, Jennifer; Grout, Jeff; Davis, Neil
Subject: FW: SRKW Imminent Threat Assessment posted

FYI

From: Leslie, Karen
Sent: July-30-18 7:35 AM
To: Leslie, Karen
Subject: SRKW Imminent Threat Assessment posted

FYI and for distribution as required. The full Southern Resident Killer Whale Imminent Threat Assessment is now posted to the SAR Public Registry (previously only the assessment summary was available). NHQ Comms has developed Media Lines. Notifications to registry subscribers will be sent out soon.

https://www.registrelep-sararegistry.gc.ca/document/default_e.cfm?documentID=3327

Cheers,
Karen

Karen Leslie
Regional Manager, Species at Risk Program
Fisheries and Oceans Canada / Government of Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

Gestionnaire régional, Programme des espèces en péril
Pêches et Océans Canada / Gouvernement du Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

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s.19(1)
s.21(1)(a)
s.21(1)(b)
s.23

Wong, Eva

From: Leslie, Karen
Sent: August-01-18 5:01 PM
To: Busby, Corina; Stewart, Julie; Webb, Cheryl; Brekke, Heather
Subject:
Attachments:

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Ross, Peter
Sent: Tuesday, July 31, 2018 12:19 PM
To: Jones, Lisa Ann
Cc: Leslie, Karen; Brekke, Heather; Shaikh, Sharlene; Legault, Josee (DOJ); Potter, Heather (DOJ); Vaillancourt, Lynne (DOJ)
Subject: RE:

Lisa:

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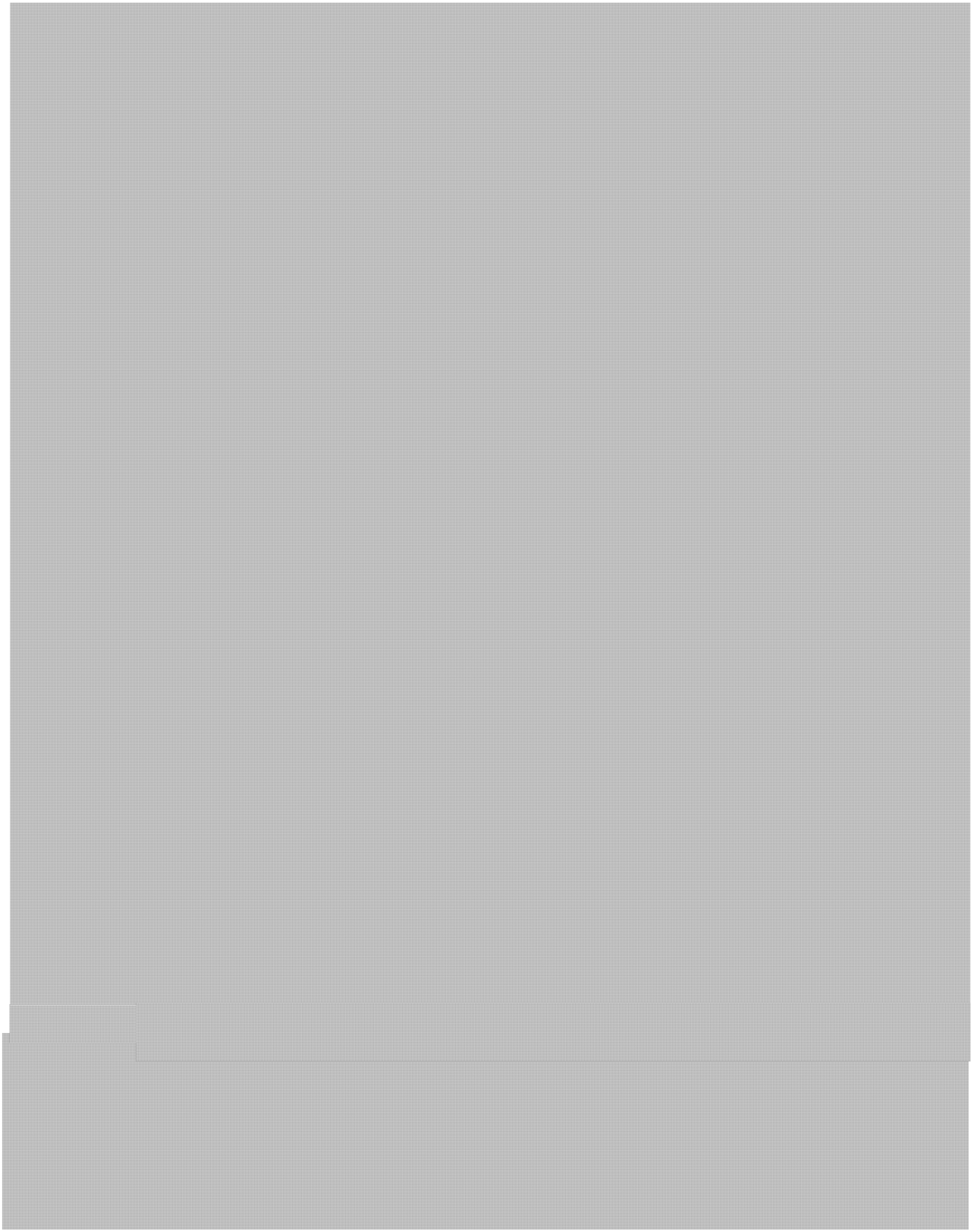

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[redacted]

Peter

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From: Jones, Lisa Ann [mailto:LisaAnn.Jones@dfo-mpo.gc.ca]
Sent: Thursday, July 26, 2018 8:37 PM
To: Ross, Peter <Peter.Ross@justice.gc.ca>
Cc: Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>; Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Shaikh, Sharlene <Sharlene.Shaikh@dfo-mpo.gc.ca>
Subject: [redacted]
Importance: High

Hello Peter,

[redacted]

Thank you in advance,

Lisa

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

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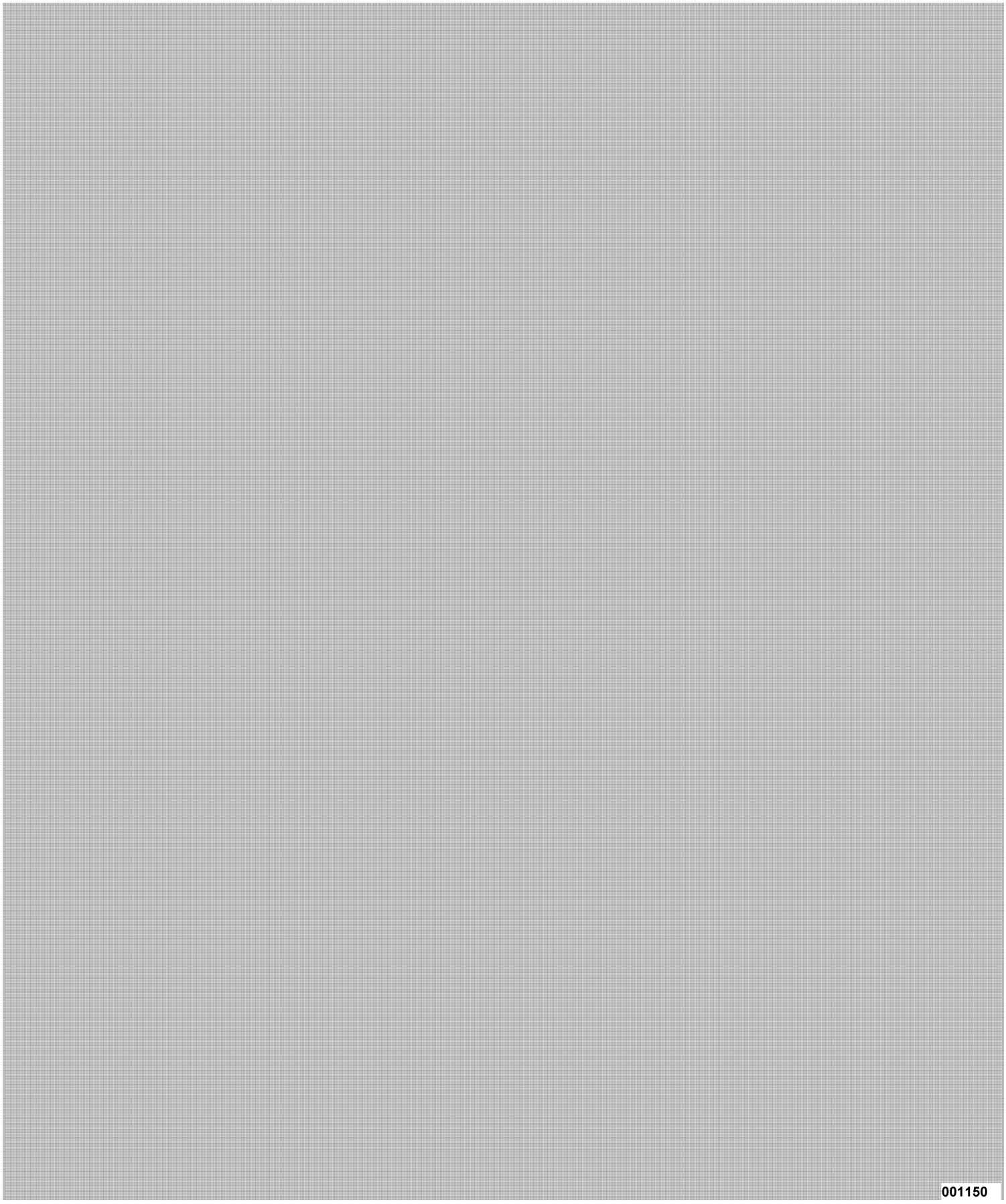
s.21(1)(a)

s.21(1)(b)

s.23



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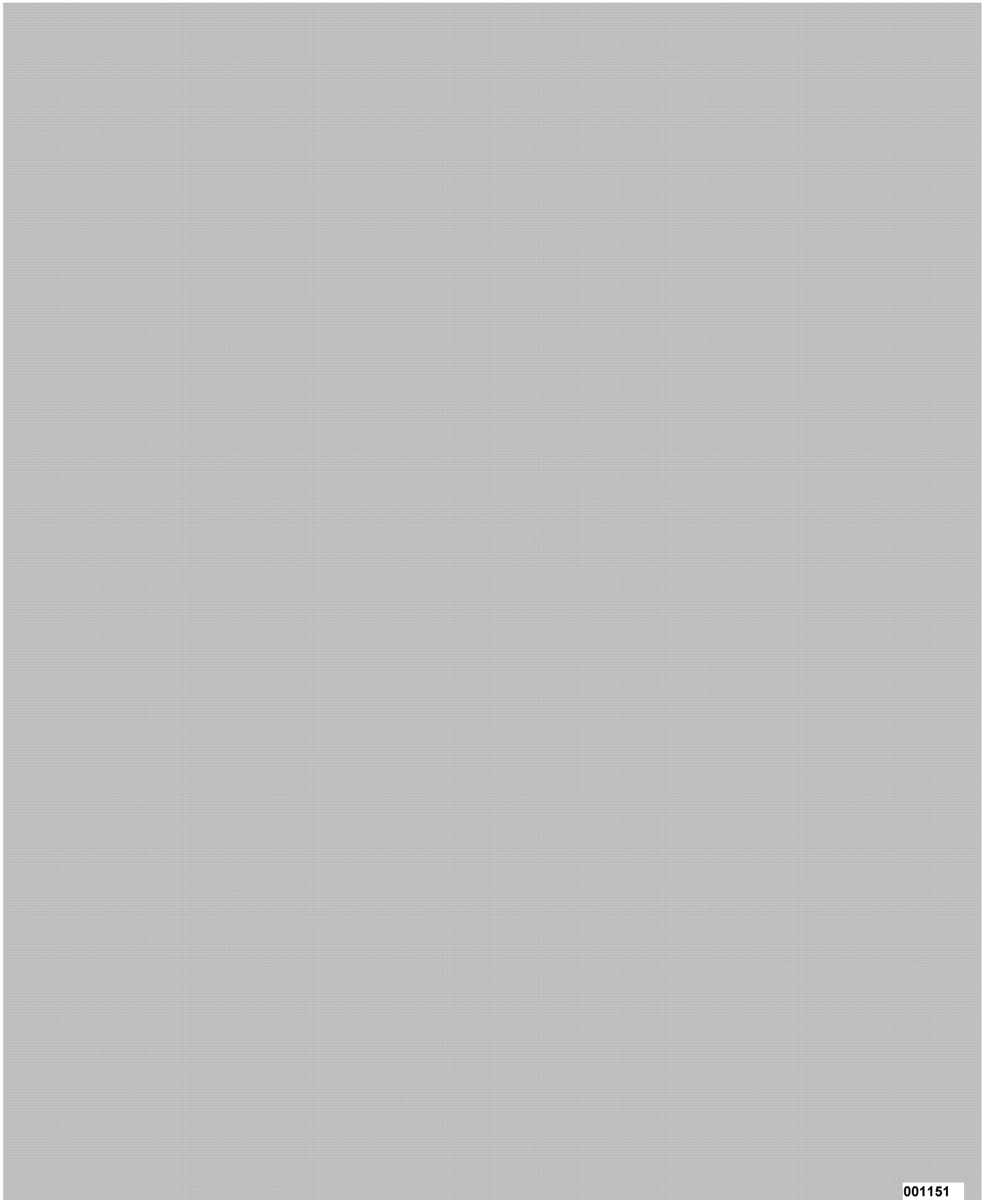
s.21(1)(a)

s.21(1)(b)

s.23



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s.19(1)

s.21(1)(a)

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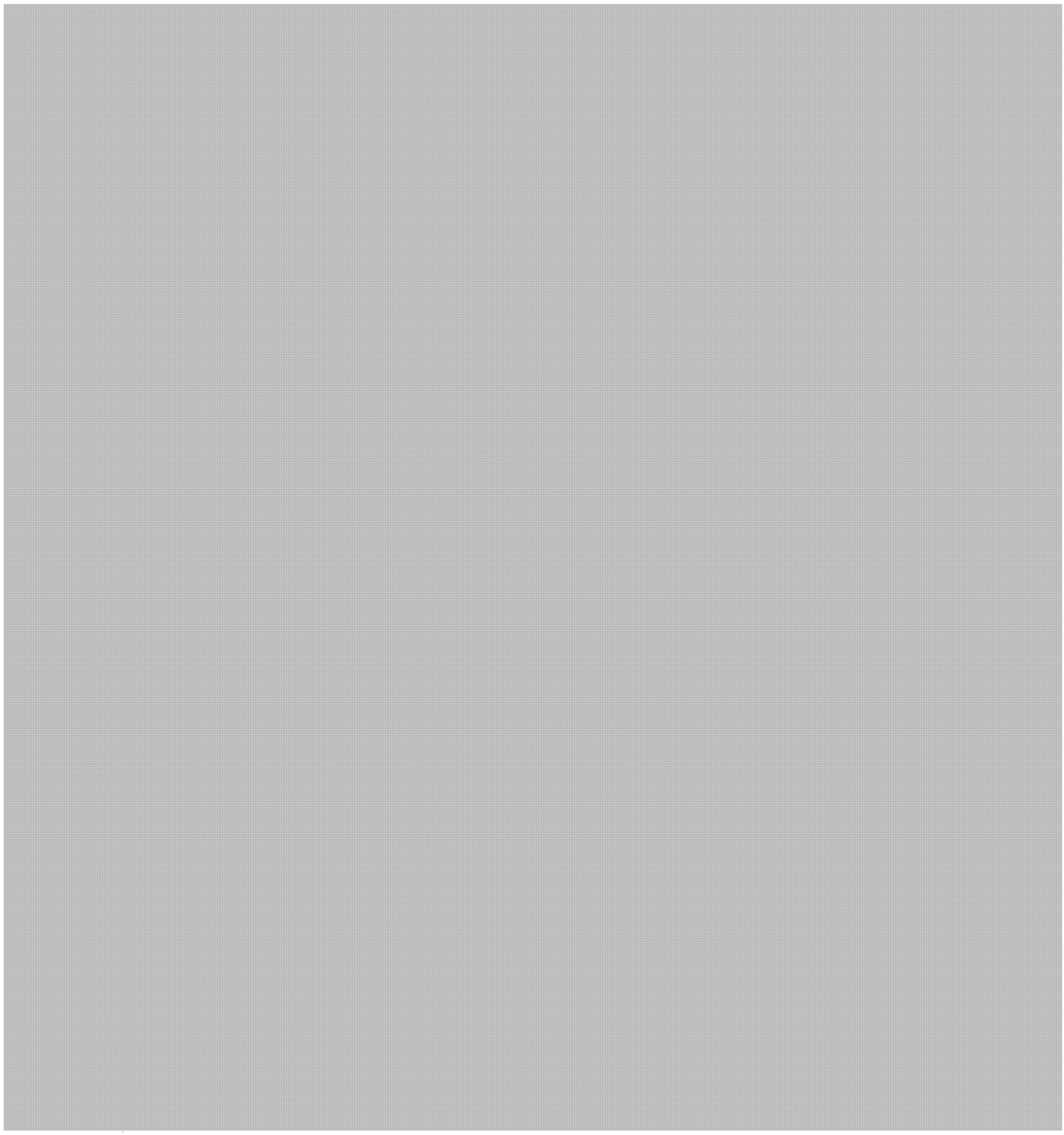

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s.21(1)(a)

s.21(1)(b)

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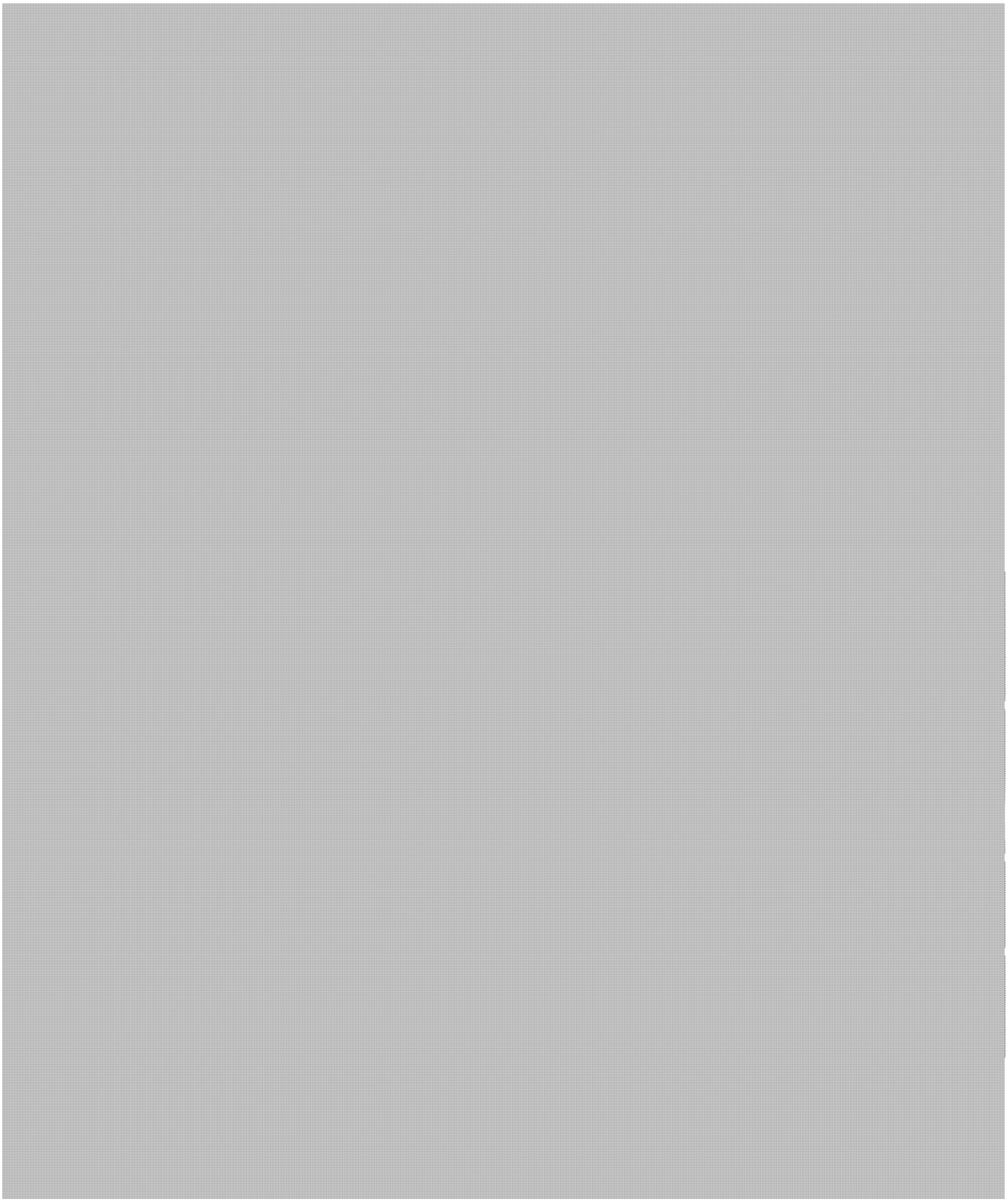

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s.21(1)(a)

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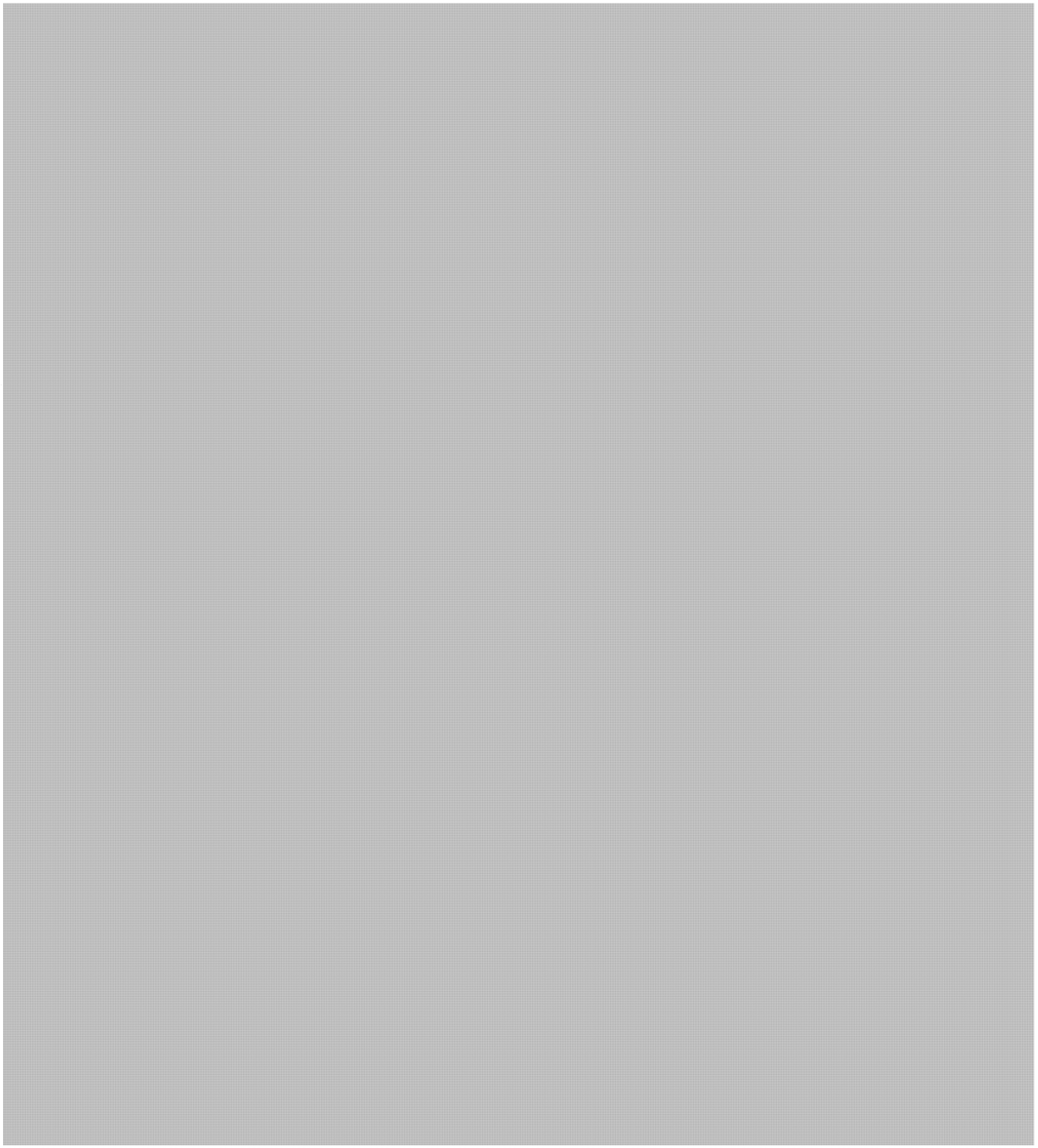

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s.21(1)(a)

s.21(1)(b)

s.23

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Wong, Eva

From: Jones, Lisa Ann
Sent: August-01-18 2:10 PM
To: Leslie, Karen
Cc: Shaikh, Sharlene; Brekke, Heather; Fershau, Jonathan
Subject: FW: August 22nd Board meeting
Attachments: FW: Request for Fisheries and Oceans Canada representative to attend August 22nd Board meeting

Importance: High

Hi Karen,

During the external review period we had a call with Doug Holmes (Chief Admin Officer, Alberni-Clayoquot Regional District (ACRD)) where he mentioned an Aug 22nd ACRD Board Meeting that he would perhaps like to invite reps from SARA to discuss the aRS for RKW. On July 26 we had an email invite to attend and a follow up email was sent August 1 looking for confirmation of attendance.

Given the external review is now closed and we are not currently planning to meet with other groups, I am looking for confirmation on how to reply to this request.

Would the following (taken mainly from our letters) be sufficient to reply via email?.....

==========

Dear Janice,

Thank you for the invite to attend the ACRD Board Meeting on August 22, 2018 in Port Alberni to discuss the external review process for the draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada*. The external review was held from June 12 to July 11 2018. At this time the Department notes that it is not able to meet your request. The imminent threat of extinction faced by Southern Resident Killer Whales (SRKW) has led to the Department's decision to not to delay or extend the external review.

We would like to take this opportunity to provide clarification on concerns raised during the external review, especially regarding potential for socio-economic impacts of management measures within critical habitat. No management measures are currently under consideration for the areas within which the proposed critical habitat occurs. Under the *Species at Risk Act* it is the destruction of critical habitat caused by human activities which is prohibited and not the activities themselves. If and when management measures for Resident Killer Whale (RKW) recovery are considered in any location, DFO will engage Indigenous groups and stakeholders through existing processes and mechanisms, and/or through other means as required.

There will be additional opportunity to provide input on the proposed Amended Recovery Strategy when it is posted to the Species at Risk Registry for a 60-day online public comment period. This comment period is anticipated to begin in late August 2018. You will receive a pre-notification email identifying the general time frame for the comment period and how to provide feedback.

Thank you,

==========

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From: PAC-SARA / LEP-PAC (DFO/MPO)
Sent: August-01-18 12:30 PM
To: Jones, Lisa Ann
Cc: McMillan, Christie
Subject: FW: August 22nd Board meeting

Hi Lisa,
Alberni-Clayoquot is following up on its Jul 18 request for DFO staff to attend the August 22 Board meeting. Please indicate how you would like us to respond (or respond to Ms. Hill). A copy of their July 27 email request, is attached.

Jonathan

From: Janice Hill [mailto:
Sent: August-01-18 11:58 AM
To: PAC-SARA / LEP-PAC (DFO/MPO)
Subject: August 22nd Board meeting

Hello
Not sure if Kristy McMillan receives emails from this address but I am needing to confirm the attendance of some of your representatives at our August 22nd Board meeting as per her discussions with Douglas Holmes, our CAO. Could you please email me back or give me a quick phone call?
Thank you

Janice Hill
Executive Assistant
Alberni-Clayoquot Regional District
3008 Fifth Avenue, Port Alberni, BC
V9Y 2E3
Phone: 250-720-2714
Email:

ALBERNI-CLAYOQUOT
REGIONAL DISTRICT

s.21(1)(a) s.21(1)(b) s.23

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Wong, Eva

From: Ross, Peter <Peter.Ross@justice.gc.ca>
Sent: August-01-18 12:41 PM
To: Jones, Lisa Ann
Cc: Legault, Josee (DOJ); Shaikh, Sharlene; Leslie, Karen; Brekke, Heather
Subject:

Attachments:

Lisa:

If you have any questions or concerns, please let us know. Thanks,

Peter

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Pages 1159 to / à 1160

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 23, 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

s.21(1)(a)

s.21(1)(b)

s.23

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Wong, Eva

From: Leslie, Karen
Sent: August-01-18 4:52 PM
To: Busby, Corina; Stewart, Julie; Webb, Cheryl; Brekke, Heather
Subject:

Attachments:

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Legault, Josée
Sent: Wednesday, August 1, 2018 2:07 PM
To: Shaikh, Sharlene; Jones, Lisa Ann
Cc: Ross, Peter (DOJ); Beaton, Heather (DOJ); Leslie, Karen; Brekke, Heather
Subject:

Sharleen and Lisa Ann,

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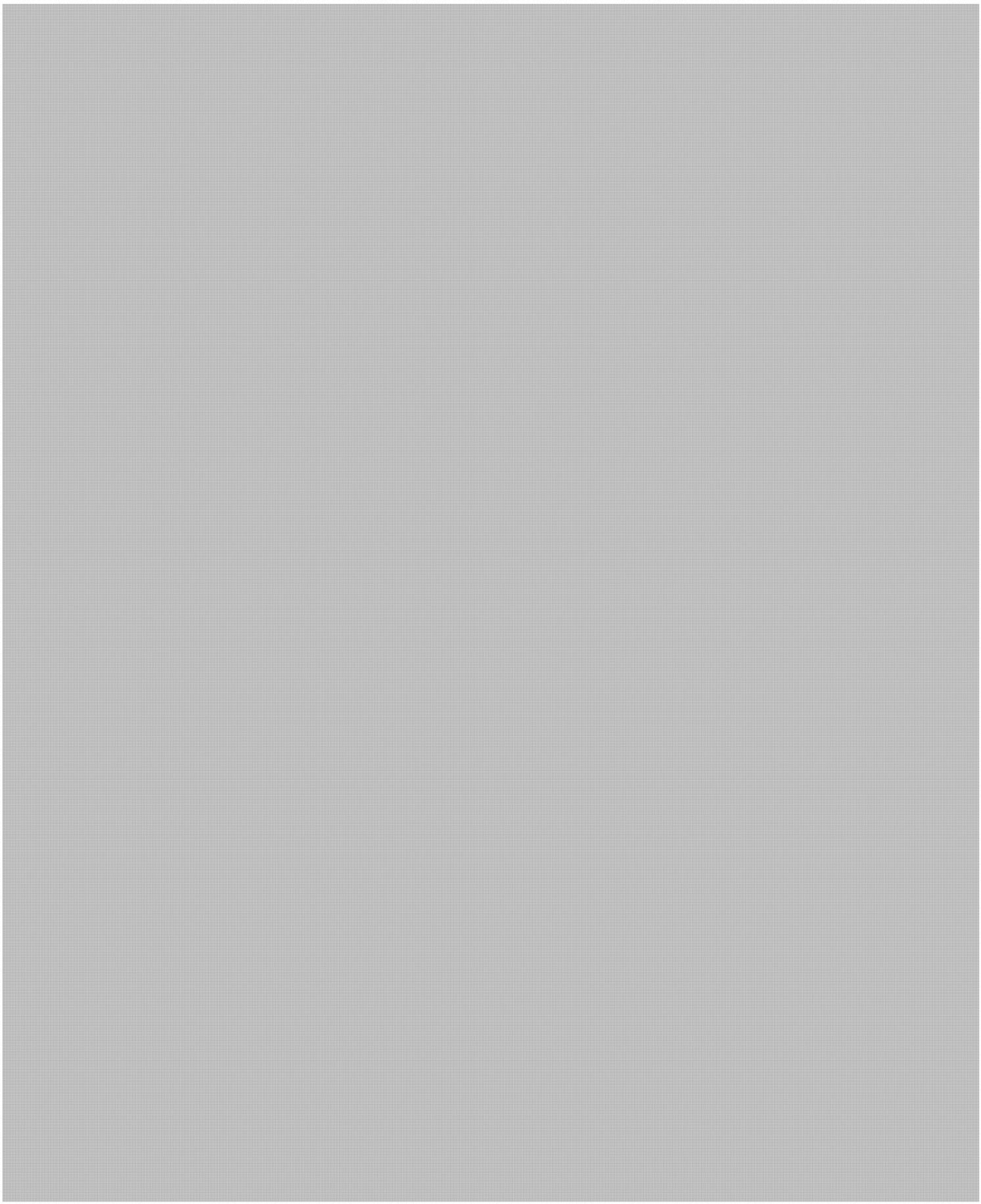

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Josée

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Josée Legault
Avocate générale / General Counsel
Ministère de la Justice du Canada / Department of Justice Canada
Services juridiques / Legal Services
Pêches et Océans Canada - Fisheries and Oceans Canada
200 Kent, Ottawa K1A 0E6
Tél. / tel.: (613) 990-2291
Téléc. / fax: (613) 990-9385
Josée.Legault@justice.gc.ca

Pages 1164 to / à 1165
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 23, 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

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Dozie, Juachi

From: Thornton, Sheila
Sent: August-01-18 7:19 AM
To: Nollens, Hendrik; Joseph Karl Gaydos; John Durban; Brad Hanson; Mike Ford; Candice Emmons; Lynne Barre; Kenneth Balcomb; Steve Raverty; Linda Rhodes; Cottrell, Paul; Holly Fearnbach; Jim McBain; Lance Barrett-Lennard; Director Marine Mammal; Kristin Wilkinson; Marty Haulena; Betsy Lutmerding
Subject: RE: [EXTERNAL] J50 update - blow sample results from NOAA

Our teams in Juan de Fuca and Swiftsure did not get any data regarding J50 – winds have been quite elevated in the outer waters.

Regards,

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Nollens, Hendrik [mailto:[redacted]
Sent: July-31-18 9:00 AM
To: Joseph Karl Gaydos; John Durban; Brad Hanson; Mike Ford; Candice Emmons; Lynne Barre; Kenneth Balcomb; Steve Raverty; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Jim McBain; Lance Barrett-Lennard; Director Marine Mammal; Kristin Wilkinson; Marty Haulena; Betsy Lutmerding
Subject: RE: [EXTERNAL] J50 update - blow sample results from NOAA

Did the team end up deciding to do some boat follows of J50, whether to get more detailed observations or while in the process of getting fecal and blow samples? If so, I can put together a first draft of a list of observations or parameters to document opportunistically.
--Hendrik.

From: Joseph Karl Gaydos [mailto:[redacted]
Sent: Monday, July 30, 2018 5:10 PM
To: John Durban; Brad Hanson; Mike Ford; Candice Emmons; Lynne Barre; Kenneth Balcomb; Nollens, Hendrik; Steve Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Director Marine Mammal; Kristin Wilkinson; Marty Haulena; Betsy Lutmerding
Subject: [EXTERNAL] J50 update - blow sample results from NOAA

Dear Colleagues,

Linda Rhodes (copied here) recently analyzes the J50 breath sample that Brad Hanson (also copied) collected a week ago. May thanks to Brad for getting the sample and for Linda for analyzing it so fast. Here is what Linda reports (Note: Bold is my emphasis):

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The breath samples from J50 from last Saturday yielded a tiny amount of DNA. There was enough to only do a couple of PCRs, so I used a pan-bacterial & a pan-fungal set of reactions. Those produced fairly clean-looking results, so we tried to sequence the products. Of the 4 sequencing sets, only one appeared to be a result of a dominant pathogen; the other 3 must have had a mixture of bacteria or fungi present, which produces mixed sequences that can't be separated from each other.

The one reliable sequence was best matched to a fungal genus, *Exophiala* (Ascomycetes). Like most fungi, the genus is widely present in the environment (especially wood & soil) but is a known opportunistic pathogen of humans & even fish. It can infect both the skin & the respiratory system.

From one of the sub-optimal sequence sets, there was a match to *Cladosporium*, a fungal genus that was frequently detected by culture in SRKW breath (Table 1 of Raverty et al 2017). It's not a well demonstrated pathogen

Based on these scant results, it's not convincing that J50 has a respiratory infection due to bacteria or fungus, because we can't rule out an environmental contaminant. Getting more breath material could help decide whether an infectious agent is part of J50's problem, but obviously in concert with assessing other possible things affecting her health.

In summary - Linda did not find evidence that supports an overwhelming pneumonia caused by a bacteria or fungus.

I spoke to Kristin Wilkinson today and updated her on our phone call last week. Based on these results and the fact that John and Holly might have some photogrammetry results soon, she thought it might be good for us to all check back in together later this week and plans to send around a conference call line soon to discuss recent findings and potential next steps.

Best,
JOE

Joseph K. Gaydos
360-376-3910
[redacted]
www.seadocsociety.org

s.19(1)

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Dozie, Juachi

From: John Durban - NOAA Federa[redacted]
Sent: August-01-18 6:05 AM
To: Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Hendrik Nollens; Stephen AGRI:EX Raverty; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; jfmcbain@gmail.com; Teri Rowles
Subject: Re: Follow Up Consultation Call

Just to let you all know that Holly and I have arrived on San Juan Island to some challenging weather for UAS ops. Given the forecast, it is unlikely we will have any new images/data prior to the call tomorrow. We have extended our planed time here through the weekend, as there is a much better weather forecast through Friday. Hopefully this will give us opportunities.

Thanks, John

- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

On Jul 31, 2018, at 1:33 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:

Hi All,

Let's plan to touch base on Thursday, August 2nd at 10 am. Please call into 503-326-7672, no passcode required.

Draft Agenda:
- Any field updates on condition, behavior, etc.?
- Discussion of breath sample results (see below email from Joe)
- Update from John Durban, photogrammetry work
- Discussion on vet health assessment
- Open discussion

Please let me know if you have any agenda items to add. I look forward to speaking with all of you on Thursday.

--

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Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

On Mon, Jul 30, 2018 at 5:10 PM, Joseph Karl Gaydos <[redacted] wrote:
Dear Colleagues,

Linda Rhodes (copied here) recently analyzes the J50 breath sample that Brad Hanson (also copied) collected a week ago. May thanks to Brad for getting the sample and for Linda for analyzing it so fast. Here is what Linda reports (Note: Bold is my emphasis):

> The breath samples from J50 from last Saturday yielded a tiny amount of DNA. There was enough to only do a couple of PCRs, so I used a pan-bacterial & a pan-fungal set of reactions. Those produced fairly clean-looking results, so we tried to sequence the products. Of the 4 sequencing sets, only one appeared to be a result of a dominant pathogen; the other 3 must have had a mixture of bacteria or fungi present, which produces mixed sequences that can't be separated from each other.
>
> The one reliable sequence was best matched to a fungal genus, *Exophiala* (Ascomycetes). Like most fungi, the genus is widely present in the environment (especially wood & soil) but is a known opportunistic pathogen of humans & even fish. It can infect both the skin & the respiratory system.
>
> From one of the sub-optimal sequence sets, there was a match to *Cladosporium*, a fungal genus that was frequently detected by culture in SRKW breath (Table 1 of Raverty et al 2017). It's not a well demonstrated pathogen
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> **Based on these scant results, it's not convincing that J50 has a respiratory infection due to bacteria or fungus, because we can't rule out an environmental contaminant. Getting more breath material could help decide whether an infectious agent is part of J50's problem, but obviously in concert with assessing other possible things affecting her health.**

In summary - Linda did not find evidence that supports an overwhelming pneumonia caused by a bacteria or fungus.

I spoke to Kristin Wilkinson today and updated her on our phone call last week. Based on these results and the fact that John and Holly might have some photogrammetry results soon, she thought it might be good for us to all check back in together later this week and plans to send around a conference call line soon to discuss recent findings and potential next steps.

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Best,
JOE

Joseph K. Gaydos
360-376-3910
[redacted]
www.seadocsociety.org

s.19(1)

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Dozie, Juachi

From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: August-01-18 2:55 PM
To: Cottrell, Paul
Subject: FW: Follow Up Consultation Call

Paul,
Will you be free tomorrow morning for this call?
Cheers
S

From: Kristin Wilkinson - NOAA Federal [mailto
Sent: Tuesday, July 31, 2018 1:34 PM
To: Joseph Karl Gaydos
Cc: John Durban; Brad Hanson; Mike Ford; Candice Emmons; Lynne Barre; Kenneth Balcomb; Hendrik Nollens; Raverty, Stephen AGRI:EX; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Director Marine Mammal; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Teri Rowles
Subject: Follow Up Consultation Call

Hi All,

Let's plan to touch base on Thursday, August 2nd at 10 am. Please call into 503-326-7672, no passcode required.

Draft Agenda:
- Any field updates on condition, behavior, etc.?
- Discussion of breath sample results (see below email from Joe)
- Update from John Durban, photogrammetry work
- Discussion on vet health assessment
- Open discussion

Please let me know if you have any agenda items to add. I look forward to speaking with all of you on Thursday.

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
Cell

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On Mon, Jul 30, 2018 at 5:10 PM, Joseph Karl Gaydos < [redacted] > wrote:
Dear Colleagues,

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> The one reliable sequence was best matched to a fungal genus, *Exophiala* (Ascomycetes). Like most fungi, the genus is widely present in the environment (especially wood & soil) but is a known opportunistic pathogen of humans & even fish. It can infect both the skin & the respiratory system.
>
> From one of the sub-optimal sequence sets, there was a match to *Cladosporium*, a fungal genus that was frequently detected by culture in SRKW breath (Table 1 of Raverty et al 2017). It's not a well demonstrated pathogen
>
> **Based on these scant results, it's not convincing that J50 has a respiratory infection due to bacteria or fungus, because we can't rule out an environmental contaminant. Getting more breath material could help decide whether an infectious agent is part of J50's problem, but obviously in concert with assessing other possible things affecting her health.**

In summary - Linda did not find evidence that supports an overwhelming pneumonia caused by a bacteria or fungus.

I spoke to Kristin Wilkinson today and updated her on our phone call last week. Based on these results and the fact that John and Holly might have some photogrammetry results soon, she thought it might be good for us to all check back in together later this week and plans to send around a conference call line soon to discuss recent findings and potential next steps.

Best,
JOE

Joseph K. Gaydos
360-376-3910
[redacted]
www.seadocsociety.org

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Dozie, Juachi

From: Thornton, Sheila
Sent: August-02-18 5:00 PM
To: Lowe, Carmel; Cottrell, Paul
Cc: MacConnachie, Sean; Kennedy, Eddy
Subject: J50 update
Attachments: Emergency Response to Provide Oral Medical Treatment Proposal for J50

Update on J50 – we had a call with the vets and our NOAA colleagues this morning on the health of J50, the 4 year old female calf that has been noted to be in poor condition. We now have lateral photos, photogrammetry, breath sample and fecal sample analyses.

The photogrammetry shows that she is in extremely poor body condition and is worse than J52, another calf that was assessed in 2017, who was lost from the population a couple of weeks later.

Breath sample analysis of microbiome did not reveal any pathogens, but the technique is insensitive and did not provide sufficient information for diagnosis.

Fecal samples also show some pathogens, but again, the data are not conclusive.

She has a white patch behind her blow hole that has been sighted intermittently over the last few weeks; this could be exudate from the blow hole, or possibly a skin condition (yeast infection, etc).

Approximately 48% of animals that strand/die, they have pneumonia. Primarily bacterial, and in approximately half of those cases, pneumonia is a cause of death.

We are discussing what diagnostics need to be undertaken to understand if there is any intervention that could be undertaken if:

a) Cytology shows that she has an overwhelming infection – can she be medicated, and if so, how would this unfold?
b) Discussions on the potential for provisioning of J50 with salmon – vector for medication, nutritional supplementation
c) Possibility of separating J50 from mum/matriline
d) Permits could be brought in to allow actions ranging from feeding through to separation, live pen, capture

Concerns over provisioning leading to behavioural imprinting were discussed; concepts included running a live salmon down a tube to separate the delivery of fish from the human contact.

A request is being submitted from members to NOAA to permit treatment; a similar preliminary request has been made to DFO (see attached email).

I may stay down south for a few more days and take Marty Haulena (Ocean Wise vet) out to get samples; Paul, I'd like to coordinate with you – please give me a call.

Updates will follow as they come in. My Sooke crew just left J35 just east of Jordan River – she is STILL carrying the calf.

Sheila

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Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
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s.19(1)

Dozie, Juachi

From: Kristin Wilkinson - NOAA Federal [redacted]
Sent: August-02-18 4:32 PM
To: Thornton, Sheila; Cottrell, Paul
Cc: Lynne Barre; Teri Rowles; Deborah Fauquier
Subject: Emergency Response to Provide Oral Medical Treatment Proposal for J50

Sheila and Paul,

NOAA Fisheries will be receiving a proposal from several members of the consultation team for emergency response to provide oral medical treatment for J50. We wanted to make you aware of this proposal which we expect to receive later today or early Friday morning. Once we have a copy of the proposal we will share it with you, J50 would need to receive consistent treatment on either side of the border so it is effective. This proposal will be reviewed by NOAA HQ and our Permits Division and will need to be approved before any action could be taken.

Please let Lynne or I know if you have any questions or if I need to share this email with anyone else at DFO.

Many thanks,

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

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Dozie, Juachi

From: John Durban - NOAA Federal [redacted]
Sent: August-02-18 8:47 AM
To: Teri Rowles
Cc: Hendrik Nollens; Kristin Wilkinson - NOAA Federal; Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Stephen AGRI:EX Raverty; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; [redacted] Lesanna Lahner; Frances Gulland; Michael moore
Subject: Re: [EXTERNAL] Aerial images J50

Ken's group definitely have these.
- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

On Aug 2, 2018, at 8:24 AM, Teri Rowles - NOAA Federal [redacted] wrote:

Is someone also getting horizontal from vessel images in high resolution?

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It is real.

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Sent: Thursday, August 02, 2018 7:14 AM
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Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Nollens, Hendrik; Stephen AGRI:EX Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; [redacted] Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: [EXTERNAL] Aerial images J50

Dear Colleagues,

Images from SR3 and NOAA, not for distribution

Note that I have copied Michael, Lessana and Frances - additional vets that we have been engaging in discussions of SRKW condition

Holly and I managed to obtain some aerial images of some J and L pod whales yesterday, including the J16s. It was very challenging wind and glare conditions, but nonetheless we wanted to share some first aerial images of J50's body condition. Attached here is an image that compares her vertical photograph with one taken in May 2017, when she was at her previously worst measure of body condition (see email below for a plot and description of body condition measures).

As you can see, the aerial comparison is concerning. In addition to a clear "peanut head", J50 has lost condition along the body axis (note particularly around the dorsal fin). I would also note that she was not in robust condition compared to others in her cohort in 2017, so the baseline image here isn't good condition.

We have been a bit rushed since getting in late last night so my apologies we didn't find our best shot from 2017 for comparison, but I think the difference is clear. We aim to get clearer images of her current condition, and other SRKWs, in the next few days and will provide updated image comparisons and quantitative measurements. When we get some time (likely this afternoon) Holly will update the plot below with condition measures for all the J16s.

We hope to be on the call today, but it depends on what we find on there boat.

Best Wishes, John

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8901 La Jolla Shores Drive, La Jolla, CA 92037

Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

Begin forwarded message:

From: John Durban - NOAA Federal

Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition

Date: July 25, 2018 at 10:15:31 AM PDT

To: Joe Gaydos

Cc: brad hanson, Mike Ford, Candi Emmons, Lynne Barre, Ken Balcomb, Hendrik Nollens, "Stephen AGRI:EX Raverty" <stephen.raverty@gov.bc.ca>, Linda Rhodes, Sheila Thornton <Sheila.Thornton@dfo-mpo.gc.ca>, Paul Cottrell <Paul.Cottrell@dfo-mpo.gc.ca>, Holly Fearnbach, Lance Barrett-Lennard, Lisa Ballance

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The BLACK line is J50. You will see that she was in significantly poorer condition in each of our last two sampling periods in 2017.

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Thanks, John

<image003.jpg>

- - - -

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Dozie, Juachi

From: Teri Rowles - NOAA Federal [redacted]
Sent: August-02-18 8:24 AM
To: John Durban - NOAA Federal
Cc: Nollens, Hendrik; Kristin Wilkinson - NOAA Federal; Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Stephen AGRI:EX Raverty; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; [redacted] Lesanna Lahner; Frances Gulland; Michael Moore
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> **Sent:** Thursday, August 02, 2018 7:14 AM
> **To:** Kristin Wilkinson - NOAA Federal
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Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

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From: John Durban - NOAA Federal [redacted]

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Date: July 25, 2018 at 10:15:31 AM PDT

To: Joe Gaydos <[redacted]>

Cc: brad hanson [redacted], Mike Ford <[redacted], Candi Emmons [redacted], Lynne Barre <[redacted] Ken Balcomb [redacted], Hendrik Nollens <[redacted], "Stephen AGRI:EX Raverty" <stephen.raverty@gov.bc.ca>, Linda Rhodes <[redacted], Sheila Thornton <Sheila.Thornton@dfo-mpo.gc.ca>, Paul Cottrell <Paul.Cottrell@dfo-mpo.gc.ca>, Holly Fearnbach [redacted], Lance Barrett-Lennard [redacted] Lisa Ballance <[redacted]>

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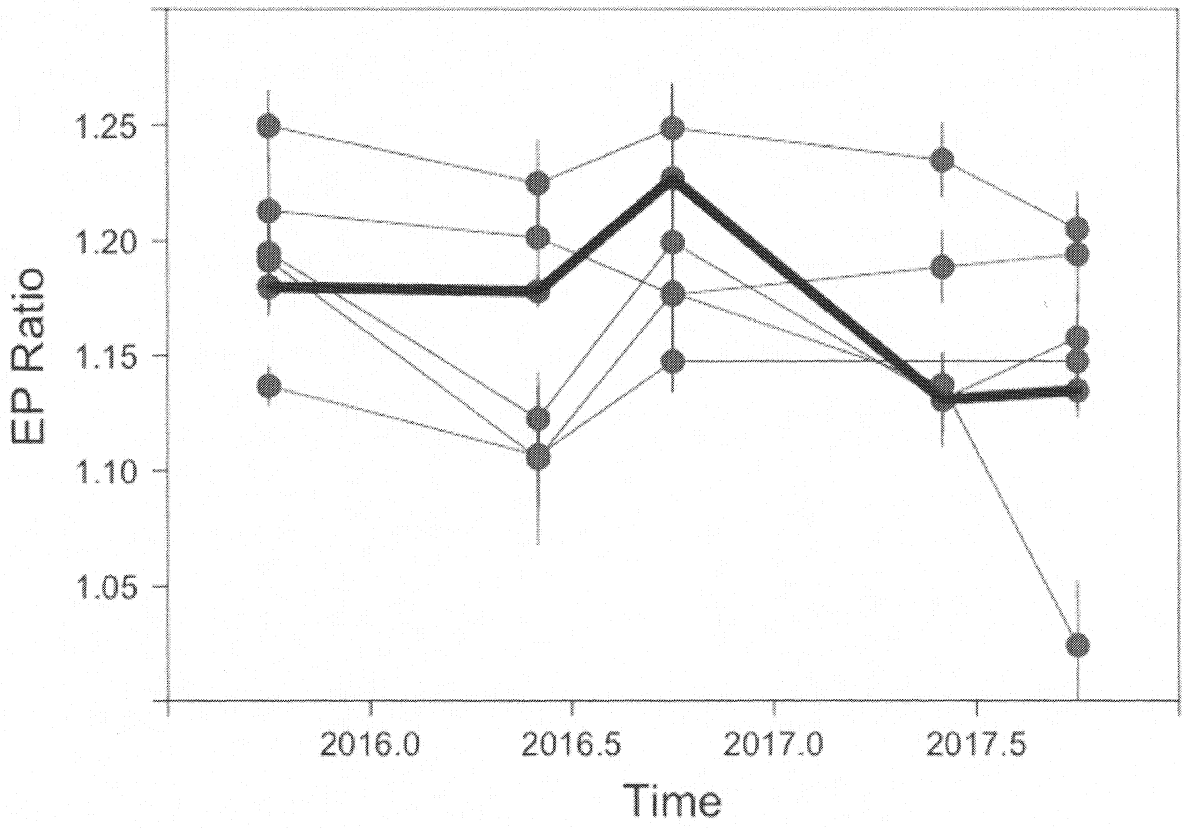

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Dozie, Juachi

From: Martin Haulena <
Sent: August-02-18 8:15 AM
To: Nollens, Hendrik; John Durban - NOAA Federal; Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Stephen AGRI:EX Raverty; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Betsy Lutmerding; Deborah Fauquier; ; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: RE: [EXTERNAL] Aerial images J50

Agreed. Looks very vegetative in outline and likely fungal/yeast.

From: Nollens, Hendrik
Sent: Thursday, August 2, 2018 8:03 AM
To: John Durban - NOAA Federal Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos brad hanson Mike Ford Candi Emmons >; Lynne Barre < ; Ken Balcomb ; Stephen AGRI:EX Raverty <stephen.raverty@gov.bc.ca>; Linda Rhodes Sheila Thornton <Sheila.Thornton@dfo-mpo.gc.ca>; Paul Cottrell <Paul.Cottrell@dfo-mpo.gc.ca>; Holly Fearnbach Lance Barrett-Lennard < Lisa Ballance Martin Haulena Betsy Lutmerding Deborah Fauquier < Teri Rowles < sanna Lahner Frances Gulland Michael Moore
Subject: RE: [EXTERNAL] Aerial images J50

I'll let other vets weight in, but the white patch is likely a yeast plaque. *Candida* spp or similar. Yeast overgrowth of the upper respiratory tract may explain the bad breath that has been noted, although the bad breath can be a side effect from inappetence as well. If a yeast plaque is present around the blowhole, the yeast has likely also invaded the upper respiratory tract (nares, paranasal diverticula) and probably the lower respiratory tract (bronchi, lungs). We don't typically think of a yeast as a primary cause of illness, but it is a clear sign of how compromised J50 is. She probably also has pneumonia and is in my opinion not likely survive without help.

From: John Durban - NOAA Federal [mailto:
Sent: Thursday, August 02, 2018 8:01 AM
To: Nollens, Hendrik; Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Stephen AGRI:EX Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
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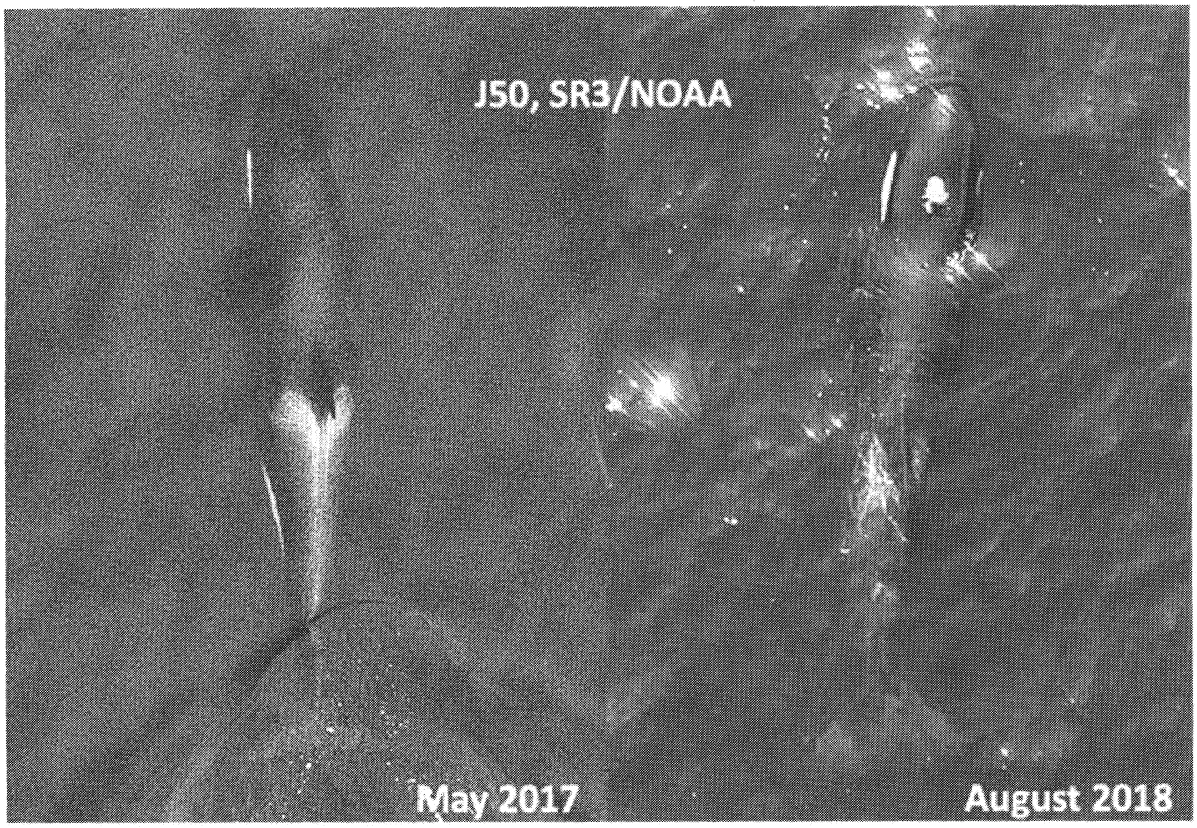

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John W. Durban, Ph.D.

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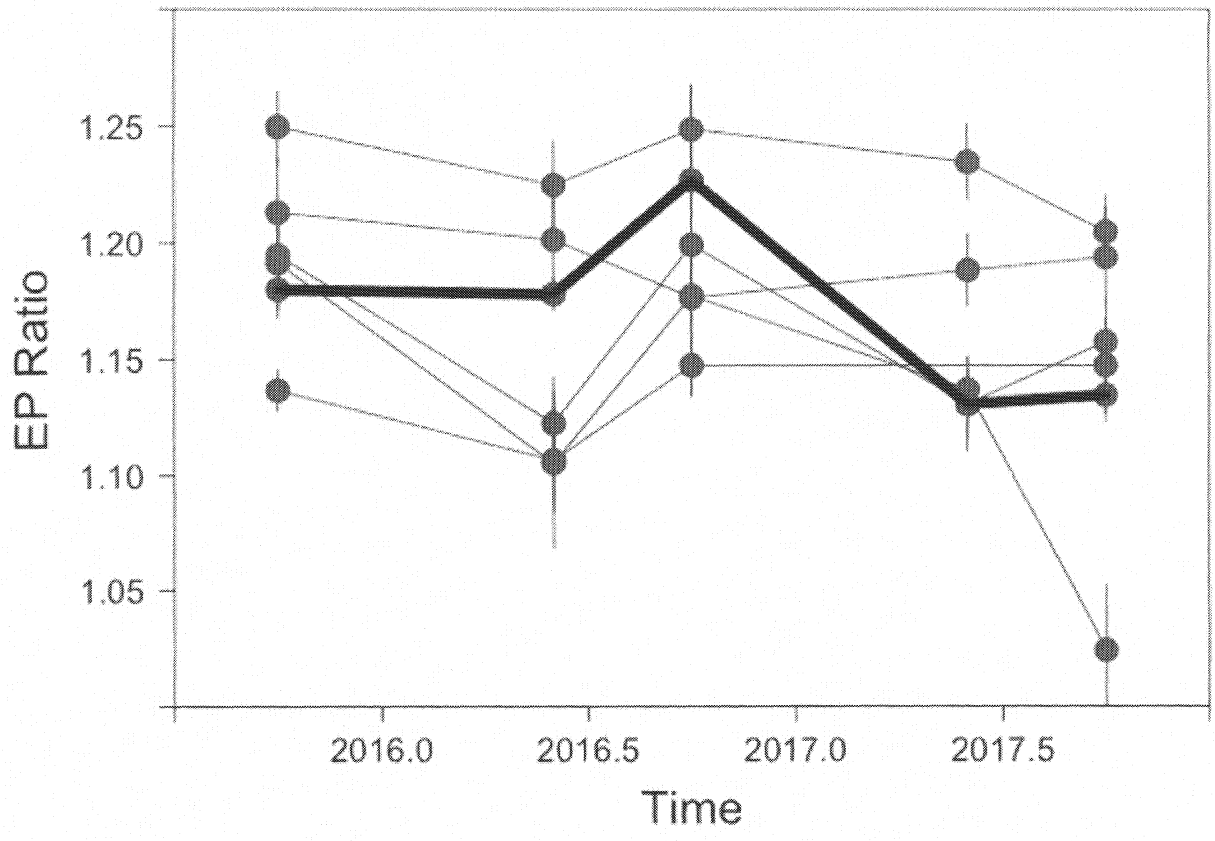

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We enjoy talking to you – If you do not wish to receive further information from us (where applicable), please email PRIVACY@OCEAN.ORG or write to our policy officer at Ocean Wise Conservation Association, PO Box 3232 Vancouver, BC V6B 3X8
For more information about our privacy or anti-spam policies, please visit www.ocean.org

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Sent: August-02-18 7:49 AM
To: Nollens, Hendrik
Cc: John Durban - NOAA Federal; Kristin Wilkinson - NOAA Federal; Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Stephen AGRI:EX Raverty; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; [redacted] Lesanna Lahner; Frances Gulland; Michael Moore
Subject: Re: [EXTERNAL] Aerial images J50

I appreciate all the information and look forward to more images as you obtain them and/or have time for more processing.

THANK YOU for your efforts.

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As you can see, the aerial comparison is concerning. In addition to a clear "peanut head", J50 has lost condition along the body axis (note particularly around the dorsal fin). I would also note that she was not in robust condition compared to others in her cohort in 2017, so the baseline image here isn't good condition.

We have been a bit rushed since getting in late last night so my apologies we didn't find our best shot from 2017 for comparison, but I think the difference is clear. We aim to get clearer images of her current condition, and other SRKWs, in the next few days and will provide updated image comparisons and quantitative measurements. When we get some time (likely this afternoon) Holly will update the plot below with condition measures for all the J16s.

We hope to be on the call today, but it depends on what we find on there boat.

Best Wishes, John

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- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program

NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037

Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

Begin forwarded message:

From: John Durban - NOAA Federal <[redacted]

Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition

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Date: July 25, 2018 at 10:15:31 AM PDT

To: Joe Gaydos [redacted]

Cc: brad hanson [redacted], Mike Ford [redacted], Candi Emmons [redacted], Lynne Barre [redacted], Ken Balcomb [redacted], Hendrik Nollens [redacted], "Stephen AGRI:EX Raverty" <stephen.raverty@gov.bc.ca>, Linda Rhodes [redacted] Sheila Thornton <Sheila.Thornton@dfo-mpo.gc.ca>, Paul Cottrell <Paul.Cottrell@dfo-mpo.gc.ca>, Holly Fearnbach [redacted], Lance Barrett-Lennard [redacted] Lisa Ballance [redacted]

Please note I am copying Holly and Lance here - my collaborators on body condition measures from recent UAS-based aerial photogrammetry.

Attached is a plot of our Eye Patch Ratio (EPR; Fearnbach et al. unpublished data) for each of the members of the J16 matriline over repeated photogrammetry measurements from September 2015, May 2016, September 2016, May 2017 and September 2017. Our ongoing data analyses indicate this EPR measure is our most sensitive measure of body condition (basically fatness behind the head), which gives us the greatest power (lowest CV in repeat measurements) to detect differences over time. Vertical error bars are SD of repeat measurements in each sampling period. Horizontal lines link the same individual over time.

The BLACK line is J50. You will see that she was in significantly poorer condition in each of our last two sampling periods in 2017.

Note that the very low measure in September 2017 was J52, another calf of the same cohort, that died within weeks of our sampling, We hope we don't see J50 measuring to be this emaciated when we begin sampling in early September, and hope she is still around then.

Please note, these data are unpublished, but are provided to facilitate our discussion tomorrow. Please do not use or distribute without permission.

Thanks, John

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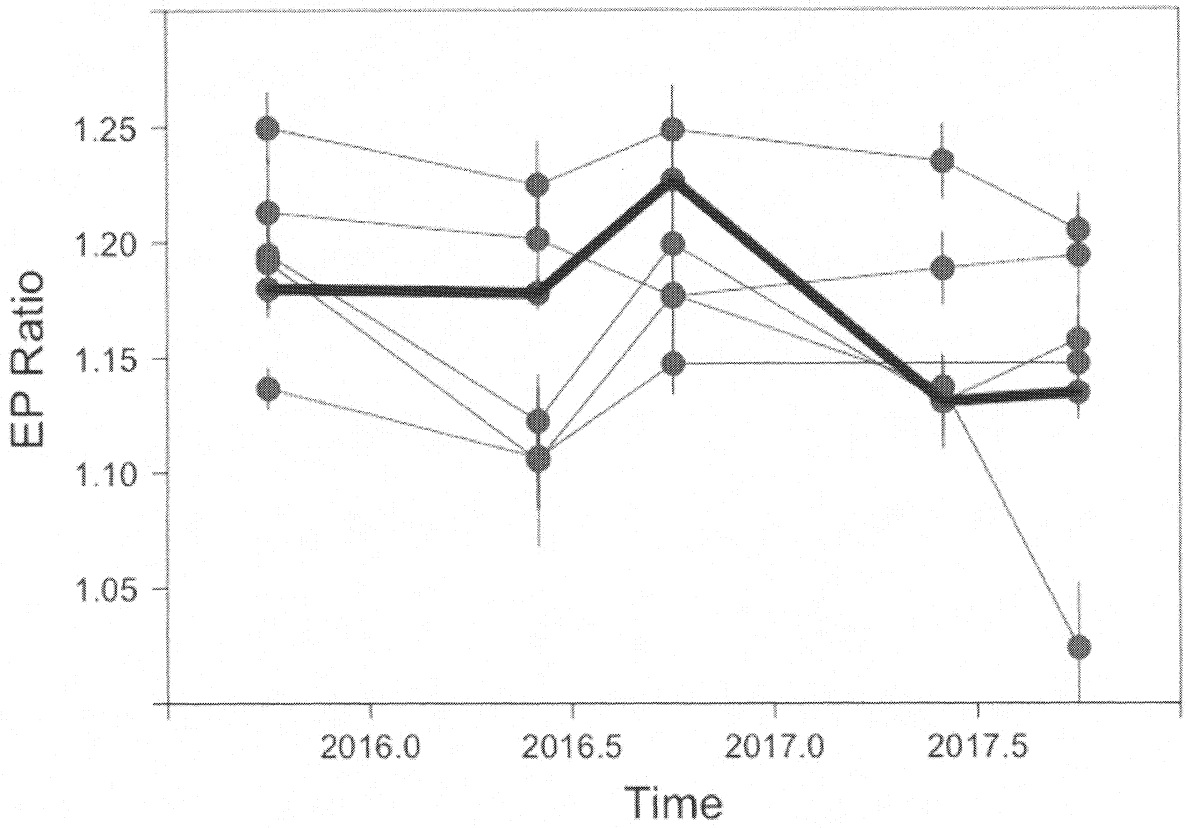

- - - -

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Dozie, Juachi

From: Joseph Karl Gaydos [redacted]
Sent: August-02-18 1:52 PM
To: Kenneth Balcomb
Cc: John Durban; Steve Raverty; Hendrik Nollens; Kristin Wilkinson; Brad Hanson; Mike Ford; Candice Emmons; Lynne Barre; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Jim McBain; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore; [redacted]
Subject: The tree and the forest

Hi Ken,

Excellent point on the tree and the forest. I think I speak for the entire group (apologies if I don't), but this focus and effort on J50 does not take away from my commitment to the larger and more important issue of long-term ecosystem level changes that will improve well being of the entire southern resident population. The time is right for the Governor's killer whale task force to make large and comprehensive recommendations for that and I envision you and I and the rest of the task force coming out with some strong recommendations by the August 27th meeting.

Thanks for being a pioneer and a thought leader on saving this population.

Best,
JOE

Joseph K. Gaydos
360-376-3910
[redacted]
www.seadocsociety.org

On Aug 2, 2018, at 11:25 AM, Kenneth Balcomb III [redacted] wrote:

Hello all,
Sorry, I dropped out of the call due to increasing interference by other calls and noise on the line. At the time of my dropout there was discussion of efficacy of provisioning or simply testing feasibility of delivering meds via food offerings. Good inputs. Thank you all for the interesting discussions about the J50 situation, but throughout the call my mind was wondering if we are not seeing enough of the forest while examining a tree. The situation of the SRKW predicament is not solely defined by the poor condition of J50, or the tragic tour of grief by J35, or even by the dismal lack of reproductive success in this population in recent years. If we do not unanimously identify and address the root cause of decline of SRKW demographic health, we will be dealing with individual cases ad infinitum, or ad extinction. As you know, I have thrown my efforts 100% into the prey issue, and I have little sympathy for other agendas because they distract from and dilute resolution of the vanishing prey problem. The participants in this email string and the conference calls ARE the folks that can make a difference in this bigger issue of root cause, and I hope that you all keep this in mind as these tragic scenarios play out.
Ken

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On Aug 2, 2018, at 9:17 AM, Joseph Karl Gaydos < > wrote:

Thanks John and Holly and Lance and for the insight on the potential Candida or other yeast infection Hendrik and Marty.
Important findings for our 10AM discussion.
Talk soon.
JOE

Joseph K. Gaydos
360-376-3910
www.seadocsociety.org

On Aug 2, 2018, at 8:49 AM, John Durban - NOAA Federal < > wrote:

Yes - I think so. We have other images that will show this, and we will get more.
- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

On Aug 2, 2018, at 8:15 AM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

Hendrik and John
Is there some discoloration or opacity of the dorsal surfaces of the flukes as well?
S

From: Nollens, Hendrik [mailto:
Sent: Thursday, August 2, 2018 8:03 AM
To: John Durban - NOAA Federal; Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Raverty, Stephen AGRI:EX; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: RE: [EXTERNAL] Aerial images J50

I'll let other vets weight in, but the white patch is likely a yeast plaque. *Candida* spp or similar. Yeast overgrowth of the upper respiratory tract may explain the bad breath that has been noted, although the bad breath can be a side effect

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from inappetence as well. If a yeast plaque is present around the blowhole, the yeast has likely also invaded the upper respiratory tract (nares, paranasal diverticula) and probably the lower respiratory tract (bronchi, lungs). We don't typically think of a yeast as a primary cause of illness, but it is a clear sign of how compromised J50 is. She probably also has pneumonia and is in my opinion not likely survive without help.

From: John Durban - NOAA Federal [mailto:
Sent: Thursday, August 02, 2018 8:01 AM
To: Nollens, Hendrik; Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Stephen AGRI:EX Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: RE: [EXTERNAL] Aerial images J50

It is real.

On August 2, 2018 7:34:33 AM "Nollens, Hendrik" wrote:

> Hi John,
>
> Thank you for sharing. This confirms what Ken said in his last email; not good. Is the white patch behind her blowhole an artifact or is it real?
>
> --HN.

From: John Durban - NOAA Federal [mailto:
Sent: Thursday, August 02, 2018 7:14 AM
To: Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Nollens, Hendrik; Stephen AGRI:EX Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: [EXTERNAL] Aerial images J50

Dear Colleagues,

Images from SR3 and NOAA, not for distribution
Note that I have copied Michael, Lessana and Frances - additional vets that we have been engaging in discussions of SRKW condition

Holly and I managed to obtain some aerial images of some J and L pod whales yesterday, including the J16s. It was very challenging wind and glare conditions, but nonetheless we wanted to share some first aerial images of J50's body condition. Attached here is an image that compares her vertical photograph with one taken in May 2017, when she was at her previously worst measure of body condition (see email below for a plot and description of body condition measures).

As you can see, the aerial comparison is concerning. In addition to a clear "peanut head", J50 has lost condition along the body axis (note particularly around the dorsal fin). I would also note that she was not in robust condition compared to others in her cohort in 2017, so the baseline image here isn't good condition.

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and other SRKWs, in the next few days and will provide updated image comparisons and quantitative measurements. When we get some time (likely this afternoon) Holly will update the plot below with condition measures for all the J16s.

We hope to be on the call today, but it depends on what we find on there boat.

Best Wishes, John

<image001.jpg>
- - - -

John W. Durban, Ph.D.

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Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

Begin forwarded message:

From: John Durban - NOAA Federal
Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition
Date: July 25, 2018 at 10:15:31 AM PDT
To: Joe Gaydos
Cc: brad hanson, Mike Ford, Candi Emmons, Lynne Barre, Ken Balcomb, Hendrik Nollens, "Stephen AGRI:EX Raverty" <stephen.raverty@gov.bc.ca>, Linda Rhodes, Sheila Thornton <Sheila.Thornton@dfo-mpo.gc.ca>, Paul Cottrell <Paul.Cottrell@dfo-mpo.gc.ca>, Holly Fearnbach, Lance Barrett-Lennard, Lisa Ballance

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Attached is a plot of our Eye Patch Ratio (EPR; Fearnbach et al. unpublished data) for each of the members of the J16 matriline over repeated photogrammetry measurements from September 2015, May 2016, September 2016, May 2017 and September 2017. Our ongoing data analyses indicate this EPR measure is our most sensitive measure of body condition (basically fatness behind the head), which gives us the greatest power (lowest CV in repeat measurements) to detect differences over time. Vertical error bars are SD of repeat measurements in each sampling period. Horizontal lines link the same individual over time.

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Note that the very low measure in September 2017 was J52, another calf of the same cohort, that died within weeks of our sampling, We hope we don't see J50 measuring to be this emaciated when we begin sampling in early September, and hope she is still around then.

Please note, these data are unpublished, but are provided to facilitate our discussion tomorrow. Please do not use or distribute without permission.

Thanks, John

<image002.jpg>

- - - -

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Dozie, Juachi

From: Kristin Wilkinson - NOAA Federal <[redacted]>
Sent: August-02-18 2:41 PM
To: Joseph Karl Gaydos; Kenneth Balcomb; Candice Emmons; John Durban; Brad Hanson; Steve Raverty; Dawn Noren; Hendrik Nollens; Mike Ford; Lynne Barre; Deborah Fauquier; Holly Fearnbach; Betsy Lutmerding; Director Marine Mammal; Jim McBain; Teri Rowles; Lance Barrett-Lennard; Thornton, Sheila; Cottrell, Paul; Marty Haulena; Linda Rhodes; Deborah Giles, PhD; Teresa Mongillo; Becker, Penny A (DFW); Jeffries, Steven (DFW); Frances Gulland
Subject: Weekend Follow Up Consultation Call, Monday, 8/6 9:30-11

Hi Everyone -

Let's catch up on the below next steps and the progress we made over the weekend on Monday, August 6th from 9:30-11. Please call into 503-326-7669, no passcode required.

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

On Thu, Aug 2, 2018 at 12:24 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Hello All,

Thank you for being on the call this morning and for sharing your insight.

Next Steps:
1. John & Holly have extended their time in the San Juans (leaving Monday morning) and will try to obtain overhead video and improved photographs of J50. Holly will be updating the Eye Patch ratio graph.
2. Deborah Giles has a goal of collecting a fecal sample from J50 following the attached protocol, this is also posted on the Google Group.
3. Brad Hanson has a goal of collecting another breath sample from J50 following the attached protocol, this is also posted on the Google Group.
4. Arrangements will be made for a veterinary health assessment to be done of J50. Shiela Thorton has offered for Dr. Marty Haulena to go out on their DFO vessel. Brad Hanson has offered his vessel as a platform as well for this assessment to be done. I'll share the draft health assessment form with Marty that Joe and Hendrik have been working on.
5. A follow-up call to discuss supplementation will be scheduled as soon as possible following some additional conversations this morning. A description of the action and a proposed idea will need to be submitted to Dr. Teri Rowles and NOAA HQ for permit review.
6. You will receive a Google Group invite from me shortly. This can be a centralized place where data, photos, video, etc. can be shared in a controlled setting. We will all agree anything placed in the folder will not be shared outside of this group. You can also access the folder by clicking:
https://drive.google.com/drive/folders/1Gg5Whty6QvPFPYJEUps2PtvTXgRDT5eq?usp=sharing

Thanks again, I look forward to our next call.

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Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

--

Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

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Dozie, Juachi

From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: August-02-18 10:25 AM
To: 'Kristin Wilkinson - NOAA Federal'; Joseph Karl Gaydos
Cc: John Durban; Brad Hanson; Mike Ford; Candice Emmons; Lynne Barre; Kenneth Balcomb; Hendrik Nollens; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Director Marine Mammal; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; jfmcbain@gmail.com; Teri Rowles
Subject: draft sampling protocol
Attachments: J50 PROPOSED HEALTH ASSESSMENT OF RECOVERED BLOW AND FECAL SAMPLES July 30, 2018.docx

From: Kristin Wilkinson - NOAA Federal [mailto:[redacted]
Sent: Tuesday, July 31, 2018 1:34 PM
To: Joseph Karl Gaydos
Cc: John Durban; Brad Hanson; Mike Ford; Candice Emmons; Lynne Barre; Kenneth Balcomb; Hendrik Nollens; Raverty, Stephen AGRI:EX; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Director Marine Mammal; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; [redacted] Teri Rowles
Subject: Follow Up Consultation Call

Hi All,

Let's plan to touch base on Thursday, August 2nd at 10 am. Please call into 503-326-7672, no passcode required.

Draft Agenda:
- Any field updates on condition, behavior, etc.?
- Discussion of breath sample results (see below email from Joe)
- Update from John Durban, photogrammetry work
- Discussion on vet health assessment
- Open discussion

Please let me know if you have any agenda items to add. I look forward to speaking with all of you on Thursday.

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted]Cell

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s.19(1)

On Mon, Jul 30, 2018 at 5:10 PM, Joseph Karl Gaydos [redacted] wrote:
Dear Colleagues,

Linda Rhodes (copied here) recently analyzes the J50 breath sample that Brad Hanson (also copied) collected a week ago. May thanks to Brad for getting the sample and for Linda for analyzing it so fast. Here is what Linda reports (Note: Bold is my emphasis):

> The breath samples from J50 from last Saturday yielded a tiny amount of DNA. There was enough to only do a couple of PCRs, so I used a pan-bacterial & a pan-fungal set of reactions. Those produced fairly clean-looking results, so we tried to sequence the products. Of the 4 sequencing sets, only one appeared to be a result of a dominant pathogen; the other 3 must have had a mixture of bacteria or fungi present, which produces mixed sequences that can't be separated from each other.
>
> The one reliable sequence was best matched to a fungal genus, *Exophiala* (Ascomycetes). Like most fungi, the genus is widely present in the environment (especially wood & soil) but is a known opportunistic pathogen of humans & even fish. It can infect both the skin & the respiratory system.
>
> From one of the sub-optimal sequence sets, there was a match to *Cladosporium*, a fungal genus that was frequently detected by culture in SRKW breath (Table 1 of Raverty et al 2017). It's not a well demonstrated pathogen
>
> **Based on these scant results, it's not convincing that J50 has a respiratory infection due to bacteria or fungus, because we can't rule out an environmental contaminant. Getting more breath material could help decide whether an infectious agent is part of J50's problem, but obviously in concert with assessing other possible things affecting her health.**

In summary - Linda did not find evidence that supports an overwhelming pneumonia caused by a bacteria or fungus.

I spoke to Kristin Wilkinson today and updated her on our phone call last week. Based on these results and the fact that John and Holly might have some photogrammetry results soon, she thought it might be good for us to all check back in together later this week and plans to send around a conference call line soon to discuss recent findings and potential next steps.

Best,
JOE

Joseph K. Gaydos
360-376-3910
[redacted]
www.seadocsociety.org

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J50 PROPOSED HEALTH ASSESSMENT OF RECOVERED BLOW AND FECAL SAMPLES

INSTRUCTIONS FOR SAMPLE PROCESSING ON-BOARD:

Exhaled breath samples*:

If feasible, breath samples should be collected simultaneously on blood agar, Sabouraud's, salt enriched agar, and a sterile empty petri dish. If this is not possible, the exhaled breath should be collected on a sterile petri dish with no media.

1. If breath samples are collected on separate Blood agar, Sabouraud's, salt enriched agar plates:
    a. Close lid after sample collection, label, tape shut and keep cool until shipping.
2. If only a single sterile empty collection plate(s) is used to collect the breath sample, then sub-sample the surface with sterile swabs:
    a. With 1 swab, prepare smears on 3 glass slides. Label and place the slides in a secure area and air dry. Keep at room temperature until shipping to SeaWorld.
    b. Collect 2 swabs in transport media for bacteriology (Ames) and 2 replicate dry swabs for fungal culture. Keep the swabs for fungal culture dry and in separate sterile containers. Keep cool and ship 1 bacteriology swab and 1 fungal swab each to SeaWorld and UC Davis.
    c. Place a third swab RNA Later® or retain dry and place in a sterile container. Refrigerate until shipped to UC Davis and NOAA.

Fecal samples*:

1. Place replicate samples of 2-4 ml of feces in 3 separate sterile containers and chill.
2. Place one sample of 1.0 ml of feces in a sterile container for molecular analysis and possible electron microscopy. Maintain chilled until shipping.
3. Swab the fecal sample using a Teflon or cotton swab. Place either in RNA Later® or a sterile container for microbiome studies. Keep at room temperature or chilled until shipment.

*Surplus samples should be inventoried and kept chilled.

INSTRUCTIONS FOR SAMPLE SHIPPING AND PROCESSING ON LAND:

Samples should be collected as early in the day as possible and shipped that afternoon to expedite overnight delivery to reference laboratories. The labs and contact information are provided below. When shipping, please inform Dr J Gaydos to ensure the labs are prepared to receive the samples and case submission forms are included.

Sample	Lab	Status/Disposition
Breath sample	UC Davis	
Breath sample	SeaWorld	
Breath sample	Dr Linda Rhodes	
Fecal sample	UC Davis	
Fecal sample	SeaWorld	
Fecal sample	Dr Linda Rhodes	
Fecal sample	Dr Chelsea Wood	

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REFERENCE LABORATORIES AND CONTACT INFORMATION

Microbiology and molecular studies
Dr Tracey Goldstein
School of Veterinary Medicine
Wildlife Health Center
University of California,
1 Shields Avenue,
Davis, California, 95616-8734
(530) 752-4167
FAX (530) 752-3318
http://www.vetmed.ucdavis.edu/whc

Diagnostic microbiology, parasitology and clinical pathology
Dr Hendrik Nollens
SeaWorld San Diego
Veterinary Services
500 SeaWorld Dr
San Diego CA 92109
(619) 606-6178

Microbiome, fecal hormones and prey analysis
Linda D. Rhodes, Ph.D.
Program Manager, Marine Microbes & Toxins Program
Northwest Fisheries Science Center, NOAA Fisheries
2725 Montlake Boulevard East
Seattle, WA 98112 USA
(206) 860-3279
[redacted]

Parasitology
Chelsea L. Wood, Ph.D.
Assistant Professor
University of Washington
School of Aquatic and Fishery Sciences
Box 355020
Seattle, WA 98195-5020
(831) 324-3076
[redacted]

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Dozie, Juachi

Subject: Invitation: J50 Consultation Call @ Thu Aug 2, 2018 5pm - 6pm (UTC) (paul.cottrell@dfo-mpo.gc.ca)
Location: NMFS - WCR - Conf Line 503-326-7672

Start: Thu 02/08/2018 10:00 AM
End: Thu 02/08/2018 11:00 AM
Show Time As: Tentative

Recurrence: (none)

Organizer: [redacted]

more details »

J50 Consultation Call

Draft Agenda:
- Any field updates on condition, behavior, etc.?
- Discussion of breath sample results (see below email from Joe)
- Update from John Durban, photogrammetry work
- Discussion on vet health assessment
- Open discussion

Please let me know if you have any agenda items to add. I look forward to speaking with all of you on Thursday.

When: Thu Aug 2, 2018 5pm – 6pm Coordinated Universal Time

Where: NMFS - WCR - Conf Line 503-326-7672 (map)

Calendar: paul.cottrell@dfo-mpo.gc.ca

Who:
- [redacted]
- Stephen Raverty
- [redacted]
- Paul.Cottrell@dfo-mpo.gc.ca
- [redacted]
- sheila.thornton@dfo-mpo.gc.ca
- [redacted]

s.19(1)

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Dozie, Juachi

From: Kristin Wilkinson - NO... (via Google Drive) <drive-shares-noreply@google.com>
Sent: August-02-18 12:35 PM
To: Cottrell, Paul
Cc: [redacted] Stephen.Raverty@gov.bc.ca; [redacted] Thornton, Sheila; [redacted]
Subject: J50 - Invitation to collaborate

[redacted] has invited you to **contribute to** the following shared folder:

J50

This can be a centralized place where data, photos, video, etc. can be shared in a controlled setting. We will all agree anything placed in the folder will not be shared outside of this group. Thanks, Kristin

Open

Google Drive: Have all your files within reach from any device.

Google LLC, 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA

Google™

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Mbarushimana, Jenny

From: Jones, Lisa Ann
Sent: August-03-18 8:40 AM
To: alana.plummer@pc.gc.ca
Cc: Brekke, Heather
Subject: RE: FW: Updated PCA/ DFO RKW aRS responses - for PCA Review

Hi Alana,

Thanks for this and note that we have the right comment for review. We will be in touch with how best to proceed from here.

Cheers
Lisa

From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: August-03-18 8:15 AM
To: Jones, Lisa Ann
Cc: Brekke, Heather
Subject: Re: FW: Updated PCA/ DFO RKW aRS responses - for PCA Review

Hi Heather and Lisa,

Apparently, there were edits to the comments that I wasn't aware of that needed to be incorporated, so if you could please refer to the version attached here, that would be great. This version was sent a little later in the day yesterday.

Thank you and happy to discuss this with the DFO team at your earliest convenience.

Best,

Alana

Alana Plummer

Scientifique des écosystèmes, Conservation et Gestion des Espèces
Parcs Canada / Gouvernement du Canada
30 rue Victoria (PC-03-C), 3-77, Gatineau QC J8X 0B3
alana.plummer@canada.ca / Tél: 819-420-9072

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From: "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>

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To: "Brekke, Heather" <Heather.Brekke@dfo-mpo.gc.ca>
Cc: "alana.plummer@pc.gc.ca" <alana.plummer@pc.gc.ca>
Date: 03/08/2018 10:30 AM
Subject: FW: Updated PCA/ DFO RKW aRS responses - for PCA Review

---

Will need discussion on this.

From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: August-02-18 12:41 PM
To: Jones, Lisa Ann
Cc: genevieve.goggin@pc.gc.ca; Leslie, Karen; Shaikh, Sharlene; Beharry, Sonja (EC)
Subject: RE: Updated PCA/ DFO RKW aRS responses - for PCA Review

Hi Lisa,

Thank you for the opportunity to review the response letter from Canada to the Muu-nulth First Nations. I have amalgamated specific comments from the PCA team into the letter, but I also need to raise a significant concern with your team.

PCA has a side-agreement for Pacific Rim National Park Reserve associated with the Muu-nulth Final Agreement, which spells out specific obligations for the Crown related to consultation with the Muu-nulth First Nations.

PCA has pulled together a supplementary document (attached), which outlines the Crown's consultation obligations with links to what has specifically asked for in his letter sent on July 11.

Unfortunately, at this time, PCA is unable to sign-off on the response letter to the Muu-nulth First Nations. We look forward to discussing how both teams can move forward on consultations with Indigenous Peoples as well as continuing the development of the recovery strategy.

Very best,

Alana

Alana Plummer

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s.21(1)(a)

s.21(1)(b)

s.23

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From: "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>
To: "alana.plummer@pc.gc.ca" <alana.plummer@pc.gc.ca>
Cc: "genevieve.goggin@pc.gc.ca" <genevieve.goggin@pc.gc.ca>, "Leslie, Karen" <Karen.Leslie@dfo-mpo.gc.ca>, "Shaikh, Sharlene" <Sharlene.Shaikh@dfo-mpo.gc.ca>
Date: 01/08/2018 10:05 AM
Subject: RE: Updated PCA/ DFO RKW aRS responses - for PCA Review

---

Morning Alana,

Thanks for the heads up. [redacted] so we expected this letter to take a little longer. We are also needing to figure out a few things for next steps with a couple of other letters [redacted] We are hoping to have all, or most of this taken care of this week [redacted]

Cheers
Lisa

From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: August-01-18 7:02 AM
To: Shaikh, Sharlene
Cc: genevieve.goggin@pc.gc.ca; Leslie, Karen; Jones, Lisa Ann
Subject: RE: Updated PCA/ DFO RKW aRS responses - for PCA Review

Good Morning All,

I wanted to alert the DFO team that PCA will need more time to provide feedback on the draft response to the Maa-nulth communities that was sent to PCA on Monday night. We hope to have a response to you by end of day tomorrow and will keep you appraised on any changes to this timeline.

Thanks for your understanding.

Best,

Alana

Alana Plummer

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s.21(1)(a)

s.21(1)(b)

From: "Shaikh, Sharlene" <Sharlene.Shaikh@dfo-mpo.gc.ca>
To: "alana.plummer@pc.gc.ca" <alana.plummer@pc.gc.ca>, "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>
Cc: "genevieve.goggin@pc.gc.ca" <genevieve.goggin@pc.gc.ca>, "Leslie, Karen" <Karen.Leslie@dfo-mpo.gc.ca>
Date: 31/07/2018 03:07 PM
Subject: RE: Updated PCA/ DFO RKW aRS responses - for PCA Review

---

Thanks very much for the responses, Alana.
I'll review the edits today and will revert back to you if any questions come up.

Thanks again,
Sharlene

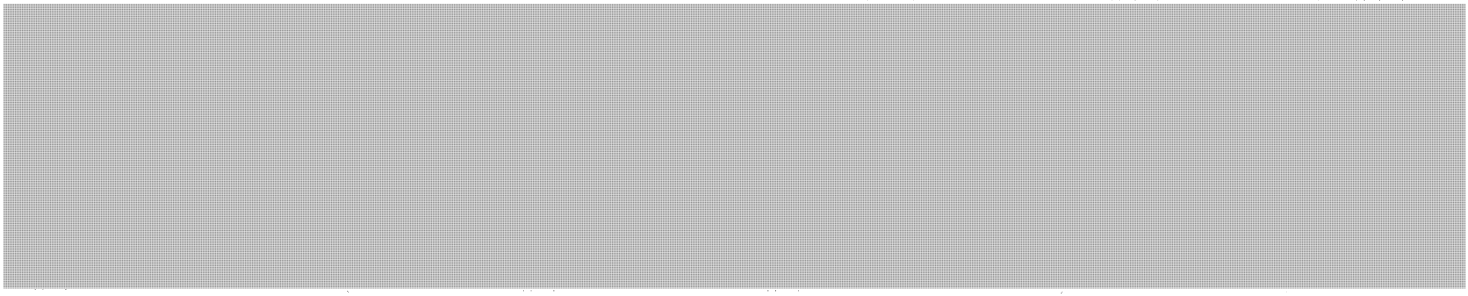
From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: July-31-18 10:40 AM
To: Jones, Lisa Ann; Shaikh, Sharlene
Cc: genevieve.goggin@pc.gc.ca
Subject: Re: Updated PCA/ DFO RKW aRS responses - for PCA Review

Hi All,

Many thanks you the DFO team for your work on these letters and for the opportunity to provide comment. Additionally, thanks Sharlene for your assistance in highlighting the changes for us; that helped speed the review of this latest drafts along.

WCA Letter:
PCA received direction late yesterday from our executive coordination office indicating that because PCA was assigned the WCA docket for Minister response, that PCA should send a separate response from our Minister than the one that DFO is sending from the Pacific Region. So, my apologies for the confusion on this one; with the multiple Ministers involved and the variation in delegation between the two departments, an approach needed to be confirmed and PCA only received clarify late yesterday on what direction needs to be taken by PCA. As such, we have removed mention of PCA from the DFO WCA letter. Because many of WCA's questions were related to the process or DFO mandate (i.e. fisheries), the letter from PCA's Minister essentially says, 'thank you for your correspondence, please see the forthcoming DFO letter for a response.'

Ditidaht First Nation and Pacheedaht First Nation Letters:
Thank you for sharing the letters sent from these communities. Because the letters were specifically addressed to DFO, PCA senior managers have suggested that the response should be sent from DFO only. As such, we have removed mention of PCA from the WCA letter. We thank you for the opportunity to review.



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Ecojustice Letter:
Some very minor edits. With those changes, we're good to go.

Maa-nulth communities Letter:
This is the letter that PCA received on Monday, and so is still to come.

If you have any questions about the edits, please don't hesitate to call.

Very best,

Alana

Alana Plummer

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From: "Shaikh, Sharlene" <Sharlene.Shaikh@dfo-mpo.gc.ca>
To: "alana.plummer@pc.gc.ca" <alana.plummer@pc.gc.ca>
Cc: "genevieve.goggin@pc.gc.ca" <genevieve.goggin@pc.gc.ca>, "Leslie, Karen" <Karen.Leslie@dfo-mpo.gc.ca>, "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>, "Brekke, Heather" <Heather.Brekke@dfo-mpo.gc.ca>
Date: 30/07/2018 08:14 PM
Subject: Updated PCA/ DFO RKW aRS responses - for PCA Review

Hi Alana,

Please find the 5 updated letters attached.

The updates to all the letters are more or less the same and these minor changes are shown in yellow highlights.

Some formatting changes were made as well and these include:
- Changing text font to 11 from 12
- moving signature placement

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- Including the web links as footnotes rather than in-text

Please let me know if you are okay with these changes and we look forward to hearing back from you on the suite of letters.

Best,

Sharlene

From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: July-30-18 2:25 PM
To: Shaikh, Sharlene
Cc: genevieve.goggin@pc.gc.ca; Brekke, Heather; Leslie, Karen; Jones, Lisa Ann
Subject: RE: RKW aRS draft response letters: first 4 that need joint review

Hi Sharlene,

Yes, we will need all the updated letters today please. It is possible that some of your edits addressed some of our comments or may spawn new comments. Please send these ASAP and I will review tomorrow morning (I am in Gatineau).

Best,

Alana

Alana Plummer

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alana.plummer@canada.ca / Tel: 819-420-9072

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From: "Shaikh, Sharlene" <Sharlene.Shaikh@dfo-mpo.gc.ca>
To: "alana.plummer@pc.gc.ca" <alana.plummer@pc.gc.ca>
Cc: "genevieve.goggin@pc.gc.ca" <genevieve.goggin@pc.gc.ca>, "Brekke, Heather" <Heather.Brekke@dfo-mpo.gc.ca>, "Leslie, Karen" <Karen.Leslie@dfo-mpo.gc.ca>, "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>
Date: 30/07/2018 05:17 PM
Subject: RE: RKW aRS draft response letters: first 4 that need joint review

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Hi Alana,

Thanks for the update and quick response! I'm glad Wednesday works for most of the letters and thank you for your consideration of our approval timelines for the one sent this morning.

We're in the process of reviews as well and some edits to the language have been made (fyi no new content has been added). I will send these updated letters to you by end of day so we can coordinate our sign-offs. Note that the same language has been used between letters for consistency so it should not be too onerous to review these edits.

If needed today regarding the reviews, you can reach me at 604.666.3811.

Cheers,
Sharlene

From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: July-30-18 2:01 PM
To: Shaikh, Sharlene
Cc: genevieve.goggin@pc.gc.ca; Brekke, Heather; Leslie, Karen; Jones, Lisa Ann
Subject: RE: RKW aRS draft response letters: first 4 that need joint review

Hi Sharlene,

For the letters sent last Thursday night, Wednesday should not be an issue. The letter sent this morning may require more thought and PCA may not be able to turn that around by Wednesday, though we will keep that request in mind.

Please note also that if further edits are made to the joint letters for which PCA has provided comments, we will need to be kept in the loop on those changes. As with the notification letters, final sign-off for PCA and DFO should be coordinated, rather than PCA approving and then DFO approving.

Thanks,

Alana

Alana Plummer

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From: "Shaikh, Sharlene" <Sharlene.Shaikh@dfo-mpo.gc.ca>
To: "alana.plummer@pc.gc.ca" <alana.plummer@pc.gc.ca>, "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>
Cc: "genevieve.goggin@pc.gc.ca" <genevieve.goggin@pc.gc.ca>, "daniel.rosset@pc.gc.ca" <daniel.rosset@pc.gc.ca>, "Brekke, Heather" <Heather.Brekke@dfo-mpo.gc.ca>, "Leslie, Karen" <Karen.Leslie@dfo-mpo.gc.ca>
Date: 30/07/2018 04:52 PM
Subject: RE: RKW aRS draft response letters: first 4 that need joint review

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Hi Alana,

Thanks for letting us know. Would you be able to let us know approximately when you'd be able to get comments back to us?

We have been asked to deliver the letters by the end of the week and, given the timing for our approvals, it would be great to receive feedback from PCA before Wednesday.

Please let us know if this is manageable or we can discuss further based on your timeline.

Best,
Sharlene

From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: July-30-18 10:10 AM
To: Jones, Lisa Ann
Cc: genevieve.goggin@pc.gc.ca; daniel.rosset@pc.gc.ca; Brekke, Heather; Shaikh, Sharlene
Subject: Re: RKW aRS draft response letters: first 4 that need joint review

Hi Lisa,

Unfortunately, PCA will not be able to provide final comment by the end of the day today. We have only had one and a half days to review these letters and the relevant executives have not had adequate time to review the 4 letters sent Thursday evening plus the additional letter sent this morning. We will work with the DFO team to get comments back to DFO as soon as possible, however, we will need more time.

Best,

Alana

Alana Plummer

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From: "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>
To: "alana.plummer@pc.gc.ca" <alana.plummer@pc.gc.ca>
Cc: "Brekke, Heather" <Heather.Brekke@dfo-mpo.gc.ca>, "Leslie, Karen" <Karen.Leslie@dfo-mpo.gc.ca>, "marie-josee.laberge@pc.gc.ca" <marie-

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josee.laberge@pc.gc.ca>, "daniel.rosset@pc.gc.ca" <daniel.rosset@pc.gc.ca>, "Busby, Corina" <Corina.Busby@dfo-mpo.gc.ca>, "Genevieve Goggin/NOTES/PC/CA (genevieve.goggin@pc.gc.ca)" <genevieve.goggin@pc.gc.ca>, "christine.hurst@pc.gc.ca" <christine.hurst@pc.gc.ca>
Date: 26/07/2018 09:08 PM
Subject: RKW aRS draft response letters: first 4 that need joint review

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Hi Alana,

As you are aware from previous dialogue, we are working on an expedited timeline to get responses back to letters received regarding the amendment to the *Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada.*

As part of those letters identified requiring joint response with PCA please find draft responses to the following groups:

- David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation, and World Wildlife Fund Canada: sent from Ecojustice
- Pacheedaht: sent from JFK Law Corporation
- Ditidaht: sent from JFK Law Corporation
- West Coast Aquatic

Please find the letters received from these groups along with the draft response letters attached for your review (and approval if no substantive changes needed).

If you can please provide input back to us by Monday, July 30th as well that would be much appreciated.

The remaining letters will be sent for your review tomorrow.

Thank you in advance,

Lisa

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

[attachment "11 Jul 18 Pacheedaht.pdf" deleted by Alana Plummer/NOTES/PC/CA] [attachment "11 July 2018 Ditidaht.pdf" deleted by Alana Plummer/NOTES/PC/CA] [attachment "11 Jul 18 - Ecojustice.pdf" deleted by Alana Plummer/NOTES/PC/CA] [attachment "External Response_DFO Response_Pacheedaht.doc" deleted by Alana Plummer/NOTES/PC/CA] [attachment "External Response_DFO Response_Ditidaht.doc" deleted by Alana Plummer/NOTES/PC/CA] [attachment "External Response_RKW

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RSa_Ecojustice.doc" deleted by Alana Plummer/NOTES/PC/CA] [attachment "Draft Response_RKW RSa_WCA_for PCA.doc" deleted by Alana Plummer/NOTES/PC/CA] [attachment "11 Jul 18 - WCA.pdf" deleted by Alana Plummer/NOTES/PC/CA] [attachment "RKW RSa for PCA Review - 30Jul.zip" deleted by Alana Plummer/NOTES/PC/CA] [attachment "[redacted] S. Behary_Aug. 2, 2018.docx" deleted by Alana Plummer/NOTES/PC/CA] [attachment "Response_Maa nulth_PCA edits.doc" deleted by Alana Plummer/NOTES/PC/CA]

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Mbarushimana, Jenny

From: Jones, Lisa Ann
Sent: August-03-18 1:35 PM
To: Brekke, Heather
Cc: Shaikh, Sharlene; McMillan, Christie
Subject: RE: DND and DFO/SARA connect - DND RKW RS Amendment 2018 Comments
Attachments: DND_aRS response to email.xlsx

Hi Heather,

Please find below the drafted reply back to Mike and Duane.

Replies to their specific concerns are in red text below. However, I have provided it in table format attached to this email as well in case you would like to send the reply this way

Cheers
Lisa
==========
Hi Mike,

Hope your summer is going well.

It was really good to be able to talk with you and Duane and to receive the comments from DND on the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada.

The external review period was held from June 12-July 11th. From the feedback received during this period, a minor change was made to the document to provide clarification. This was a change in text in Table 4 and Table 6 to change from:

- "Anthropogenic noise level that does not impede effective acoustic social signaling and echolocation to locate prey.", to
- "Anthropogenic noise level that does not interfere with life functions and is sufficient for effective acoustic social signaling and echolocation to locate prey."

The next step will be a 60-day online public comment period on the Species at Risk Public Registry anticipated to begin in late August.

I have provided a response to your questions below in red text. Please let me know if you have any further questions.

I look forward to our next meeting and our continued collaboration.

Cheers,

Heather

From: Michael.Waters@forces.gc.ca [mailto:Michael.Waters@forces.gc.ca]
Sent: July-09-18 3:42 PM
To: Brekke, Heather
Cc: Jones, Lisa Ann; Duane.Freeman@forces.gc.ca; Tracy.Cornforth@forces.gc.ca
Subject: RE: DND and DFO/SARA connect - DND RKW RS Amendment 2018 Comments
Importance: High

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Hi Heather,

Great to talk with you and the Marine Team the other week. Here are DND's comments (and questions) on the RKW Recovery Strategy Amendment:

- Page 59 – There doesn't appear to be any overlap of the new proposed CH off Southwestern Vancouver Island and Western Dixon Entrance. DND has no further comment on the new CH. – thank you for confirming.
- Page 64 – Table 5 – The fourth project listed here is "identify sources of acoustic disturbance that may negatively impact of affect access to critical habitat". What are the details of this study? Where is it being conducted?
    - The studies outlined in Table 5 of the draft Amended Recovery Strategy are consistent with those identified in the 2008 and 2011 versions of the Recovery Strategies and outline the broad approaches underway to identify additional critical habitat, and to refine knowledge of the functions, features and attributes of CH.
    - Examples of studies that are currently underway include the Marine Environmental Quality initiative which is new and broadly focused on determining the acoustic impact on SRKW from marine vessels. Last fiscal, a series of acoustic devices were deployed in Juan de Fuca and Haro Strait to develop an acoustic signature for the area. This will serve as a baseline for future comparisons. The devices are retrieved and replaced roughly every 8 weeks resulting in a very comprehensive data set. This summer field teams are in key foraging area assessing feeding behaviour and successes (known as focal follows) while capturing data on the presence of different vessel types and their activity. Biological samples (scat, prey debris etc) are collected as well.
- Page 65 – Acoustic Disturbance – Section 4.2.3 Underwater Noise is referenced but there is no Section 4.2.3 in the original RS. In the original RS Section 2.2.3 is the section on Disturbance where underwater noise is discussed. It appears that this section is the same as it was in the original RS but can DFO confirm if anything in section 2.2.3 changed as part of this amendment or is it the same as it was before?
    - In addition to the revisions to the critical habitat section, the draft Amended Recovery Strategy included changes to formatting, to better align with current national templates for recovery documents. This included re-ordering of some sections of the document, such that section 2.2.3 in the 2011 Recovery Strategy became section 4.2.3 in the current draft Amended Recovery Strategy.
    - Minor changes were incorporated throughout the document as needed, to update outdated background and species information and add more current studies/references where relevant. For example, a reference to the NOAA 2016 guidance on acoustic thresholds was added to the Underwater noise section.
    - As the draft Amended Recovery Strategy is lengthy, and the review of the amendment pertains specifically to section 7 (critical habitat), only the critical habitat section was sent out with the invitations to provide feedback during the external review period. However, the full draft Amended Recovery Strategy has been (and remains) available for reference as a link on the DFO Pacific consultation webpage: http://www.pac.dfo-mpo.gc.ca/consultation/sara-lep/killerwhales-epaulards/index-eng.html
- Page 67 – Table 6 – second row – Acoustic Disturbance – What is the specific anthropogenic noise level that does not impede effective acoustic social signalling? What is the anthropogenic noise level that does not result in loss of habitat availability or function? Is this the same as the NOAA 160dB behavioural disturbance threshold?
    - As stated in the DFO Science Advisory Report that identified the two additional proposed critical habitat areas (DFO SAR 2017/011), threshold noise levels that may result in loss of critical habitat functioning are currently unknown. Additional information regarding thresholds and levels that may result in loss of critical habitat functions may be incorporated into future amendments to this Recovery Strategy as it becomes available. If this were to occur, these amendments would follow the same review process (i.e. a regional external review followed by a 60-day public comment period).

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- Further, following feedback from the external review one minor change to the Amended Recovery Strategy was incorporated to provide clarification, and as such the text should read "Anthropogenic noise level that does not interfere with life functions and is sufficient for effective acoustic social signaling and echolocation to locate prey." The same change was made for this text in Table 4 on page 63.

- Page 68 – Table 6 – first row - Physical Disturbance – most of the references here are specific to preventing RKW from rubbing but should there be mention about activities that prevent whales from pursuing prey/foraging?
  - The functions of critical habitat that could be impacted by physical disturbance are listed in the fourth column of this table and include feeding and foraging; and reproduction, socializing, resting in addition to beach rubbing. As the potential physical impacts of vessel disturbance to these functions are primarily due to the presence and close approach of vessels, the feature of physical space and attribute of 200m of unimpeded physical space around individual whales (and the corresponding activity listed in the 'Effect –pathway' (column 3)) is applicable to all these functions, not just beach rubbing.
- The idea of collaboration on recovery measures such as the ones listed in the Action plan (#33,36, and 46 in particular) is of interest to DND. In addition to the Ministers announcement of DNDs involvement in PRISMM maybe we can discuss the potential for other opportunities to work together on other SARA Marine species. Are there any other specific projects that come to mind that both DFO and DND could collaborate on?
  - We welcome the opportunity to look for ways we can work together on RKW recovery measures and look forward to discussing this further at our next meeting in September.

Looking forward to our meeting in Sept.

Cheers,

Mike

Mike Waters, BSc, RPBio
Environment Officer | Agent de l'environnement
Formation Safety and Environment | Sécurité et Environnement de la Formation
Canadian Forces Base Esquimalt | Base des Forces Canadiennes Esquimalt
National Defence | Défense Nationale
Building 199D Room 302 | Bâtiment 199D Pièce 302
Victoria, BC V9A 7N2
michael.waters@forces.gc.ca
Telephone : 250-363-7457
Cell : [redacted]
Facsimile : 250-363-2567

From: Brekke, Heather [mailto:Heather.Brekke@dfo-mpo.gc.ca]
Sent: June-18-18 3:47 PM
To: Waters MR@FSE@Esquimalt <Michael.Waters@forces.gc.ca>
Cc: Jones, Lisa Ann <LisaAnn.Jones@dfo-mpo.gc.ca>
Subject: DND and DFO/SARA connect

Hi Mike,

Great to see you at ECHO last week. As discussed, I had talked to Duane Freeman last October at the whale symposium and followed up via email about setting up a meeting to discuss DND activities and marine mammal recovery efforts.

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DND should have also received a letter via email last week regarding the current review of the critical habitat section of a draft SARA Amended Recovery Strategy for RKW, which has a closing date for comments of July 11.

Please let me know if you would like to set up a meeting (in person or via phone) to chat further, and/or if you require further information about the Recovery Strategy amendment to incorporate the new information on critical habitat.

Thanks
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009
Cell: [redacted]

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Page 59 – There doesn't appear to be any overlap of the new proposed CH off Southwestern Vancouver Island and Western Dixon Entrance. DND has no further comment on the new CH.

Page 64 – Table 5 – The fourth project listed here is "identify sources of acoustic disturbance that may negatively impact of affect access to critical habitat". What are the details of this study? Where is it being conducted?

Page 65 – Acoustic Disturbance – Section 4.2.3 Underwater Noise is referenced but there is no Section 4.2.3 in the original RS. In the original RS Section 2.2.3 is the section on Disturbance where underwater noise is discussed. It appears that this section is the same as it was in the original RS but can DFO confirm if anything in section 2.2.3 changed as part of this amendment or is it the same as it was before?

Page 67 – Table 6 – second row – Acoustic Disturbance – What is the specific anthropogenic noise level that does not impede effective acoustic social signalling? What is the anthropogenic noise level that does not result in loss of habitat availability or function? Is this the same as the NOAA 160dB behavioural disturbance threshold?

Page 68 – Table 6 – first row - Physical Disturbance – most of the references here are specific to preventing RKW from rubbing but should there be mention about activities that prevent whales from pursuing prey/foraging?

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The idea of collaboration on recovery measures such as the ones listed in the Action plan (#33,36, and 46 in particular) is of interest to DND. In addition to the Ministers announcement of DNDs involvement in PRISMM maybe we can discuss the potential for other opportunities to work together on other SARA Marine species. Are there any other specific projects that come to mind that both DFO and DND could collaborate on?

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Thank you for confirming.
The studies outlined in Table 5 of the draft Amended Recovery Strategy are consistent with those identified in the 2008 and 2011 versions of the Recovery Strategies and outline the broad approaches underway to identify additional critical habitat, and to refine knowledge of the functions, features and attributes of CH.

Examples of studies that are currently underway include the Marine Environmental Quality initiative which is new and broadly focused on determining the acoustic impact on SRKW from marine vessels. Last fiscal, a series of acoustic devices were deployed in Juan de Fuca and Haro Strait to develop an acoustic signature for the area. This will serve as a baseline for future comparisons. The devices are retrieved and replaced roughly every 8 weeks resulting in a very comprehensive data set. This summer field teams are in key foraging area assessing feeding behaviour and successes (known as focal follows) while capturing data on the presence of different
o In addition to the revisions to the critical habitat section, the draft Amended Recovery Strategy included changes to formatting, to better align with current national templates for recovery documents. This included re-ordering of some sections of the document, such that section 2.2.3 in the 2011 Recovery Strategy became section 4.2.3 in the current draft Amended Recovery Strategy.

o Minor changes were incorporated throughout the document as needed, to update outdated background and species information and add more current studies/references where relevant. For example, a reference to the NOAA 2016 guidance on acoustic thresholds was added to the Underwater noise section.

o As the draft Amended Recovery Strategy is lengthy, and the review of the amendment pertains specifically to section 7 (critical habitat), only the critical habitat section was sent out with the invitations to provide feedback during the external review period. However, the full draft Amended Recovery Strategy has been (and remains)
o As stated in the DFO Science Advisory Report that identified the two additional proposed critical habitat areas (DFO SAR 2017/011), threshold noise levels that may result in loss of critical habitat functioning are currently unknown. Additional information regarding thresholds and levels that may result in loss of critical habitat functions may be incorporated into future amendments to this Recovery Strategy as it becomes available. If this were to occur, these amendments would follow the same review process (i.e. a regional external review followed by a 60-day public comment period).

o Further, following feedback from the external review one minor change to the Amended Recovery Strategy was incorporated to provide clarification, and as such the text should read "Anthropogenic noise level that does

The functions of critical habitat that could be impacted by physical disturbance are listed in the fourth column of this table and include feeding and foraging; and reproduction, socializing, resting in addition to beach rubbing. As the potential physical impacts of vessel disturbance to these functions are primarily due to the presence and close approach of vessels, the feature of physical space and attribute of 200m of unimpeded physical space around individual whales (and the corresponding activity listed in the 'Effect –pathway' (column 3)) is applicable to all these functions, not just beach rubbing.

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We welcome the opportunity to look for ways we can work together on RKW recovery measures and look forward to discussing this further at our next meeting in September.

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s.21(1)(a)

s.21(1)(b)

s.23

Wong, Eva

From: Jones, Lisa Ann
Sent: August-03-18 7:30 AM
To: Brekke, Heather
Cc: alana.plummer@pc.gc.ca
Subject: FW: Updated PCA/ DFO RKW aRS responses - for PCA Review
Attachments: Maa-nulth SRKW consultation requirements - for DOJ_S. Behary_Aug. 2, 2018.docx; Response_Maa nulth_PCA edits.doc

Will need discussion on this.

From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: August-02-18 12:41 PM
To: Jones, Lisa Ann
Cc: genevieve.goggin@pc.gc.ca; Leslie, Karen; Shaikh, Sharlene; Beharry, Sonja (EC)
Subject: RE: Updated PCA/ DFO RKW aRS responses - for PCA Review

Hi Lisa,

Thank you for the opportunity to review the response letter from Canada to the Muu-nulth First Nations. I have amalgamated specific comments from the PCA team into the letter, but I also need to raise a significant concern with your team.

PCA has a side-agreement for Pacific Rim National Park Reserve associated with the Muu-nulth Final Agreement, which spells out specific obligations for the Crown related to consultation with the Muu-nulth First Nations.

PCA has pulled together a supplementary document (attached), which outlines the Crown's consultation obligations with links to what has specifically asked for in his letter sent on July 11.

Unfortunately, at this time, PCA is unable to sign-off on the response letter to the Muu-nulth First Nations. We look forward to discussing how both teams can move forward on consultations with Indigenous Peoples as well as continuing the development of the recovery strategy.

Very best,

Alana

Alana Plummer

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Ecosystem Scientist, Species Conservation and Management

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30 Victoria St. (PC-03-C), 3-77. Gatineau QC J8X 0B3
alana.plummer@canada.ca / Tel: 819-420-9072

Parcs Canada - 450 000 km2 de souvenirs / Parks Canada - 450 000 km2 of memories

From: "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>
To: "alana.plummer@pc.gc.ca" <alana.plummer@pc.gc.ca>
Cc: "genevieve.goggin@pc.gc.ca" <genevieve.goggin@pc.gc.ca>, "Leslie, Karen" <Karen.Leslie@dfo-mpo.gc.ca>, "Shaikh, Sharlene" <Sharlene.Shaikh@dfo-mpo.gc.ca>
Date: 01/08/2018 10:05 AM
Subject: RE: Updated PCA/ DFO RKW aRS responses - for PCA Review

---

Morning Alana,

Thanks for the heads up. [redacted] so we expected this letter to take a little longer. We are also needing to figure out a few things for next steps with a couple of other letters [redacted] We are hoping to have all, or most of this taken care of this week [redacted]

Cheers
Lisa

From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: August-01-18 7:02 AM
To: Shaikh, Sharlene
Cc: genevieve.goggin@pc.gc.ca; Leslie, Karen; Jones, Lisa Ann
Subject: RE: Updated PCA/ DFO RKW aRS responses - for PCA Review

Good Morning All,

I wanted to alert the DFO team that PCA will need more time to provide feedback on the draft response to the Maa-nulth communities that was sent to PCA on Monday night. We hope to have a response to you by end of day tomorrow and will keep you appraised on any changes to this timeline.

Thanks for your understanding.

Best,

Alana

Alana Plummer

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s.21(1)(a)

s.21(1)(b)

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From: "Shaikh, Sharlene" <Sharlene.Shaikh@dfo-mpo.gc.ca>
To: "alana.plummer@pc.gc.ca" <alana.plummer@pc.gc.ca>, "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>
Cc: "genevieve.goggin@pc.gc.ca" <genevieve.goggin@pc.gc.ca>, "Leslie, Karen" <Karen.Leslie@dfo-mpo.gc.ca>
Date: 31/07/2018 03:07 PM
Subject: RE: Updated PCA/ DFO RKW aRS responses - for PCA Review

---

Thanks very much for the responses, Alana.
I'll review the edits today and will revert back to you if any questions come up.

Thanks again,
Sharlene

From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: July-31-18 10:40 AM
To: Jones, Lisa Ann; Shaikh, Sharlene
Cc: genevieve.goggin@pc.gc.ca
Subject: Re: Updated PCA/ DFO RKW aRS responses - for PCA Review

Hi All,

Many thanks you the DFO team for your work on these letters and for the opportunity to provide comment. Additionally, thanks Sharlene for your assistance in highlighting the changes for us; that helped speed the review of this latest drafts along.

WCA Letter:
PCA received direction late yesterday from our executive coordination office indicating that because PCA was assigned the WCA docket for Minister response, that PCA should send a separate response from our Minister than the one that DFO is sending from the Pacific Region. So, my apologies for the confusion on this one; with the multiple Ministers involved and the variation in delegation between the two departments, an approach needed to be confirmed and PCA only received clarify late yesterday on what direction needs to be taken by PCA. As such, we have removed mention of PCA from the DFO WCA letter. Because many of WCA's questions were related to the process or DFO mandate (i.e. fisheries), the letter from PCA's Minister essentially says, 'thank you for your correspondence, please see the forthcoming DFO letter for a response.'

Ditidaht First Nation and Pacheedaht First Nation Letters:
Thank you for sharing the letters sent from these communities. Because the letters were specifically addressed to DFO, PCA senior managers have suggested that the response should be sent from DFO only. As such, we have removed mention of PCA from the WCA letter. We thank you for the opportunity to review.

s.21(1)(a)
s.21(1)(b)
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[redacted]

Ecojustice Letter:
Some very minor edits. With those changes, we're good to go.

Maa-nulth communities Letter:
This is the letter that PCA received on Monday, and so is still to come.

If you have any questions about the edits, please don't hesitate to call.

Very best,

Alana

Alana Plummer

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From: "Shaikh, Sharlene" <Sharlene.Shaikh@dfo-mpo.gc.ca>
To: "alana.plummer@pc.gc.ca" <alana.plummer@pc.gc.ca>
Cc: "genevieve.goggin@pc.gc.ca" <genevieve.goggin@pc.gc.ca>, "Leslie, Karen" <Karen.Leslie@dfo-mpo.gc.ca>, "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>, "Brekke, Heather" <Heather.Brekke@dfo-mpo.gc.ca>
Date: 30/07/2018 08:14 PM
Subject: Updated PCA/ DFO RKW aRS responses - for PCA Review

Hi Alana,

Please find the 5 updated letters attached.

The updates to all the letters are more or less the same and these minor changes are shown in yellow highlights.

Some formatting changes were made as well and these include:
- Changing text font to 11 from 12
- moving signature placement

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- Including the web links as footnotes rather than in-text

Please let me know if you are okay with these changes and we look forward to hearing back from you on the suite of letters.

Best,

Sharlene

From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: July-30-18 2:25 PM
To: Shaikh, Sharlene
Cc: genevieve.goggin@pc.gc.ca; Brekke, Heather; Leslie, Karen; Jones, Lisa Ann
Subject: RE: RKW aRS draft response letters: first 4 that need joint review

Hi Sharlene,

Yes, we will need all the updated letters today please. It is possible that some of your edits addressed some of our comments or may spawn new comments. Please send these ASAP and I will review tomorrow morning (I am in Gatineau).

Best,

Alana

Alana Plummer

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From: "Shaikh, Sharlene" <Sharlene.Shaikh@dfo-mpo.gc.ca>
To: "alana.plummer@pc.gc.ca" <alana.plummer@pc.gc.ca>
Cc: "genevieve.goggin@pc.gc.ca" <genevieve.goggin@pc.gc.ca>, "Brekke, Heather" <Heather.Brekke@dfo-mpo.gc.ca>, "Leslie, Karen" <Karen.Leslie@dfo-mpo.gc.ca>, "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>
Date: 30/07/2018 05:17 PM
Subject: RE: RKW aRS draft response letters: first 4 that need joint review

---

Hi Alana,

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Thanks for the update and quick response! I'm glad Wednesday works for most of the letters and thank you for your consideration of our approval timelines for the one sent this morning.

We're in the process of reviews as well and some edits to the language have been made (fyi no new content has been added). I will send these updated letters to you by end of day so we can coordinate our sign-offs. Note that the same language has been used between letters for consistency so it should not be too onerous to review these edits.

If needed today regarding the reviews, you can reach me at 604.666.3811.

Cheers,
Sharlene

From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: July-30-18 2:01 PM
To: Shaikh, Sharlene
Cc: genevieve.goggin@pc.gc.ca; Brekke, Heather; Leslie, Karen; Jones, Lisa Ann
Subject: RE: RKW aRS draft response letters: first 4 that need joint review

Hi Sharlene,

For the letters sent last Thursday night, Wednesday should not be an issue. The letter sent this morning may require more thought and PCA may not be able to turn that around by Wednesday, though we will keep that request in mind.

Please note also that if further edits are made to the joint letters for which PCA has provided comments, we will need to be kept in the loop on those changes. As with the notification letters, final sign-off for PCA and DFO should be coordinated, rather than PCA approving and then DFO approving.

Thanks,

Alana

Alana Plummer

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From: "Shaikh, Sharlene" <Sharlene.Shaikh@dfo-mpo.gc.ca>
To: "alana.plummer@pc.gc.ca" <alana.plummer@pc.gc.ca>, "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>
Cc: "genevieve.goggin@pc.gc.ca" <genevieve.goggin@pc.gc.ca>, "daniel.rosset@pc.gc.ca" <daniel.rosset@pc.gc.ca>, "Brekke, Heather" <Heather.Brekke@dfo-mpo.gc.ca>, "Leslie, Karen" <Karen.Leslie@dfo-mpo.gc.ca>
Date: 30/07/2018 04:52 PM
Subject: RE: RKW aRS draft response letters: first 4 that need joint review

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Hi Alana,

Thanks for letting us know. Would you be able to let us know approximately when you'd be able to get comments back to us?

We have been asked to deliver the letters by the end of the week and, given the timing for our approvals, it would be great to receive feedback from PCA before Wednesday.

Please let us know if this is manageable or we can discuss further based on your timeline.

Best,
Sharlene

From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: July-30-18 10:10 AM
To: Jones, Lisa Ann
Cc: genevieve.goggin@pc.gc.ca; daniel.rosset@pc.gc.ca; Brekke, Heather; Shaikh, Sharlene
Subject: Re: RKW aRS draft response letters: first 4 that need joint review

Hi Lisa,

Unfortunately, PCA will not be able to provide final comment by the end of the day today. We have only had one and a half days to review these letters and the relevant executives have not had adequate time to review the 4 letters sent Thursday evening plus the additional letter sent this morning. We will work with the DFO team to get comments back to DFO as soon as possible, however, we will need more time.

Best,

Alana

Alana Plummer

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From: "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>
To: "alana.plummer@pc.gc.ca" <alana.plummer@pc.gc.ca>
Cc: "Brekke, Heather" <Heather.Brekke@dfo-mpo.gc.ca>, "Leslie, Karen" <Karen.Leslie@dfo-mpo.gc.ca>, "marie-josee.laberge@pc.gc.ca" <marie-josee.laberge@pc.gc.ca>, "daniel.rosset@pc.gc.ca" <daniel.rosset@pc.gc.ca>, "Busby, Corina" <Corina.Busby@dfo-mpo.gc.ca>, "Genevieve Goggin/NOTES/PC/CA (genevieve.goggin@pc.gc.ca)" <genevieve.goggin@pc.gc.ca>, "christine.hurst@pc.gc.ca" <christine.hurst@pc.gc.ca>
Date: 26/07/2018 09:08 PM
Subject: RKW aRS draft response letters: first 4 that need joint review

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Hi Alana,

As you are aware from previous dialogue, we are working on an expedited timeline to get responses back to letters received regarding the amendment to the *Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada.*

As part of those letters identified requiring joint response with PCA please find draft responses to the following groups:

- David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation, and World Wildlife Fund Canada: sent from Ecojustice
- Pacheedaht: sent from JFK Law Corporation
- Ditidaht: sent from JFK Law Corporation
- West Coast Aquatic

Please find the letters received from these groups along with the draft response letters attached for your review (and approval if no substantive changes needed).

If you can please provide input back to us by Monday, July 30th as well that would be much appreciated.

The remaining letters will be sent for your review tomorrow.

Thank you in advance,

Lisa

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

[attachment "11 Jul 18 Pacheedaht.pdf" deleted by Alana Plummer/NOTES/PC/CA] [attachment "11 July 2018 Ditidaht.pdf" deleted by Alana Plummer/NOTES/PC/CA] [attachment "11 Jul 18 - Ecojustice.pdf" deleted by Alana Plummer/NOTES/PC/CA] [attachment "External Response_DFO Response_Pacheedaht.doc" deleted by Alana Plummer/NOTES/PC/CA] [attachment "External Response_DFO Response_Ditidaht.doc" deleted by Alana Plummer/NOTES/PC/CA] [attachment "External Response_RKW RSa_Ecojustice.doc" deleted by Alana Plummer/NOTES/PC/CA] [attachment "Draft Response_RKW RSa_WCA_for PCA.doc" deleted by Alana Plummer/NOTES/PC/CA] [attachment "11 Jul 18 - WCA.pdf" deleted by Alana Plummer/NOTES/PC/CA] [attachment "RKW RSa for PCA Review - 30Jul.zip" deleted by Alana Plummer/NOTES/PC/CA]

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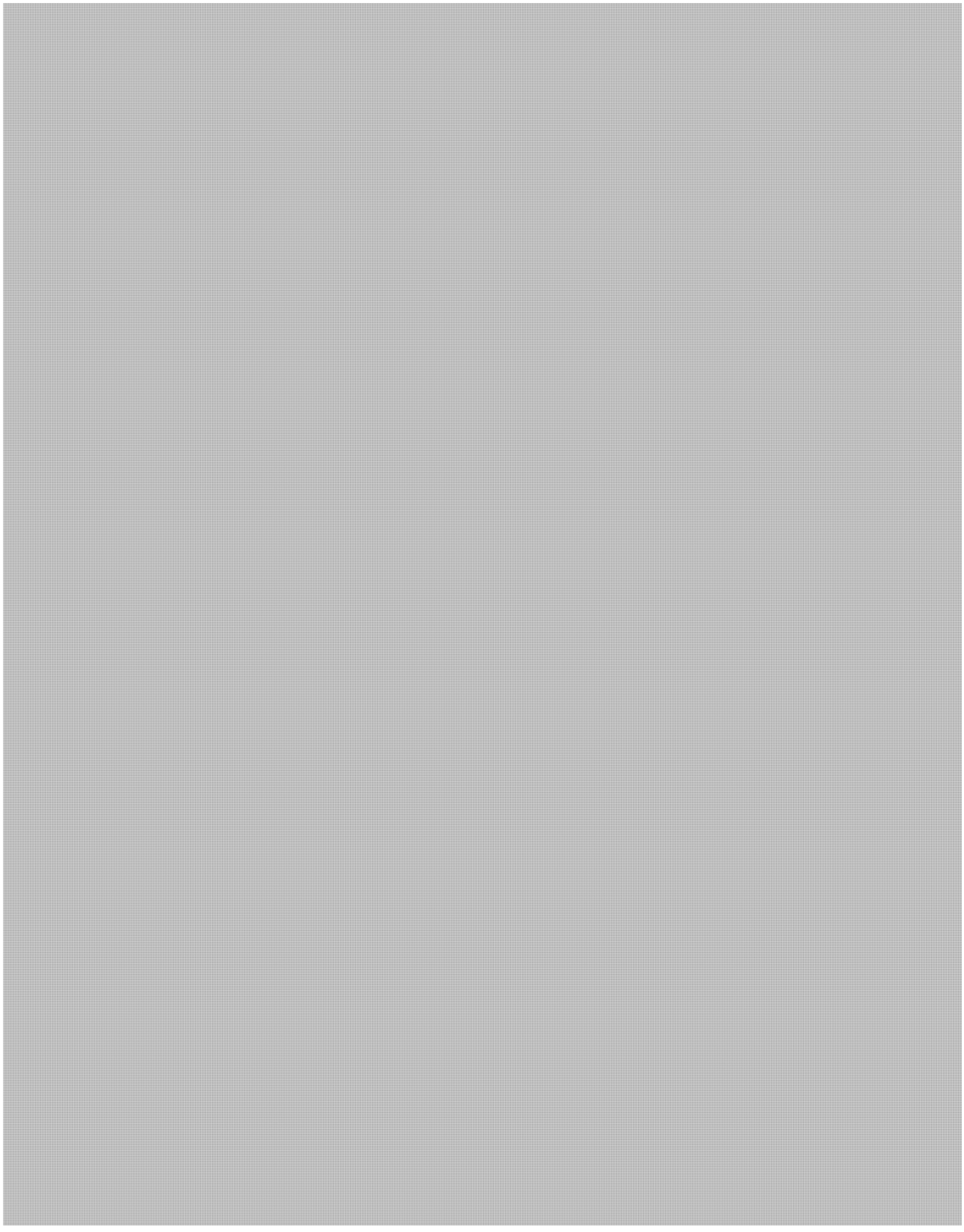
s.21(1)(a)

s.21(1)(b)

s.23



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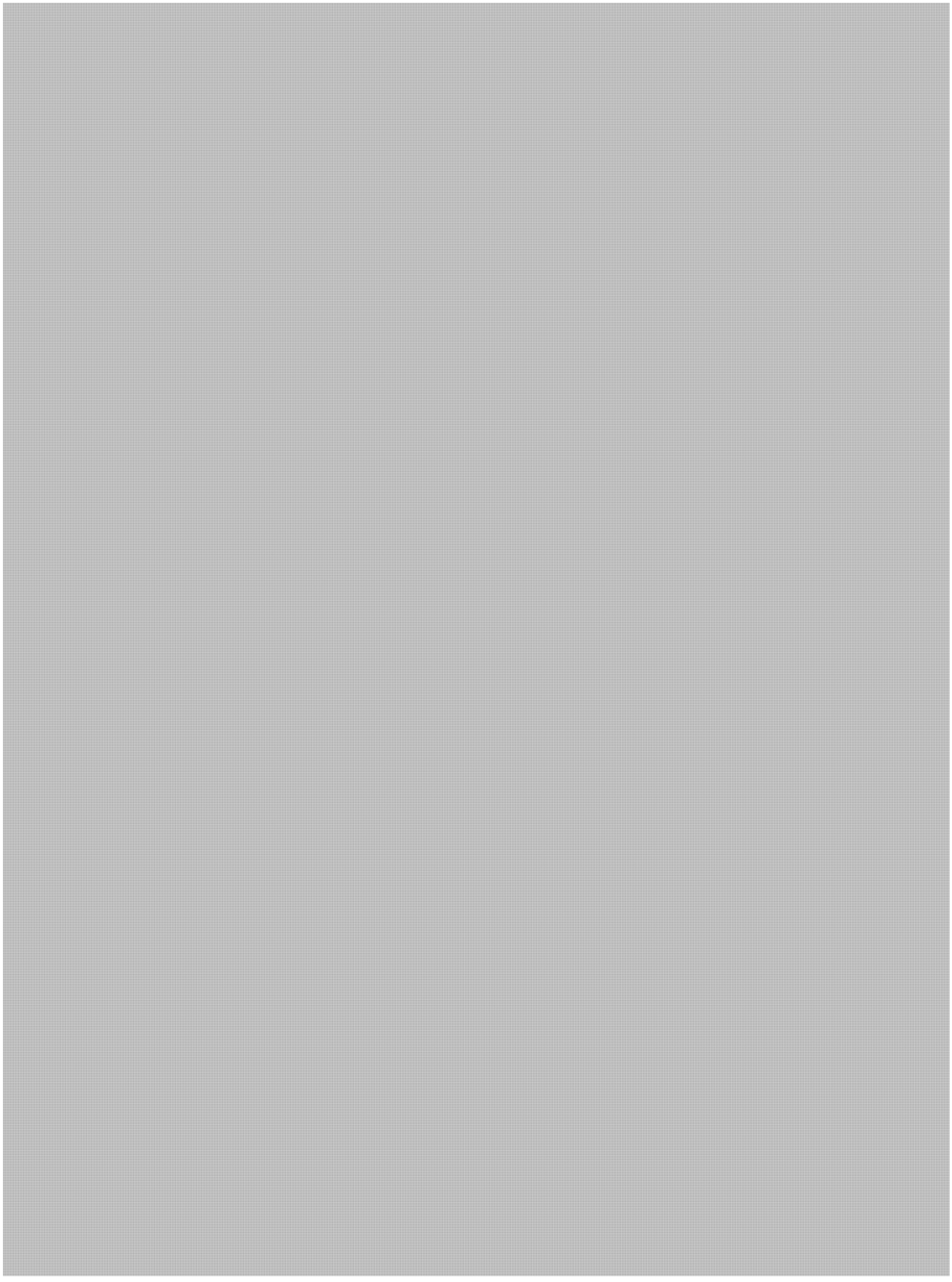
s.21(1)(a)

s.21(1)(b)

s.23



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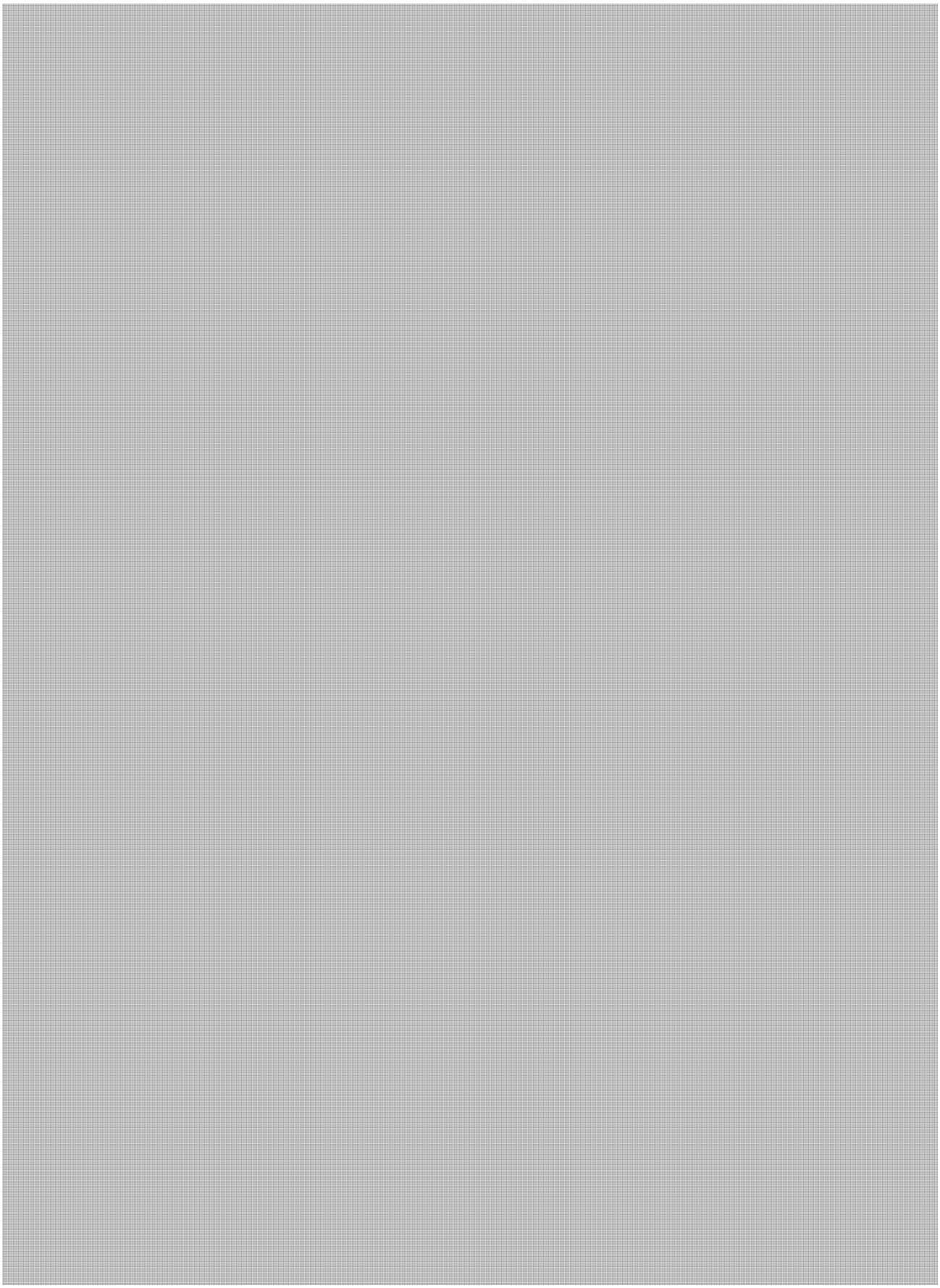
s.21(1)(a)

s.21(1)(b)

s.23



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Wong, Eva

From: Jones, Lisa Ann
Sent: August-03-18 12:19 PM
To: Berry.Wijdeven@gov.bc.ca
Cc: Brekke, Heather
Subject: FW: Haida Gwaii-MITT Project Charter for Recreational Fishing Activities

Hello Berry,

I am following up on an email that was sent along to me that stems from a concern you had raised during discussion of the Haida Gwaii-MITT Project Charter for Recreational Fishing Activities regarding potential implications of management measures for Northern Resident Killer Whales.

Overall, there is a Recovery Strategy and Action Plan for Northern and Southern Resident Killer Whales (RKW), with the latter identifying 98 recovery measures needed for the recovery and protection of RKW and a subsequent review of the Action Plan, that identified a few more measures.

Further, we are currently amending the Recovery Strategy to incorporate two additional areas of special importance to be identified as critical habitat (CH): the waters off southwestern Vancouver Island and waters of west Dixon Entrance. The amendment also provides clarification of the functions, features, and attributes for both current and additional CH. We just completed the external review of the draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada* and the next step will be a 60-day online public comment period on the Species at Risk Public Registry anticipated to begin in late August. No management measures are currently under consideration for the areas within which the proposed critical habitat occurs. Under the *Species at Risk Act* it is the destruction of critical habitat caused by human activities which is prohibited and not the activities themselves. If and when management measures for RKW recovery are considered in any location, DFO will engage Indigenous groups and stakeholders through existing processes and mechanisms, and/or through other means as required.

I hope this helps to address your concern but please let me know if you have any further questions and I would be happy to reply.

Thank you,

Lisa

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

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s.21(1)(a)

s.21(1)(b)

Wong, Eva

From: Jones, Lisa Ann
Sent: August-03-18 8:46 AM
To: Fershau, Jonathan
Cc: Brekke, Heather; Shaikh, Sharlene
Subject: FW: External Review of Draft Recovery Strategy
Attachments: MECTS-#3938985-v1-Main_Docs_2018-001-01370.pdf; MECTS-#3934417-v1-Main_Docs_2018-001-01303.pdf; MECTS-#3941008-v1-Main_Docs_2018-001-01445.pdf; MECTS-#3940997-v1-Main_Docs_2018-001-01444.pdf; MECTS-#3934193-v1-Main_Docs_2018-001-01293.pdf; MECTS-#3947860-v1-Main_Docs_2018-001-01554.pdf

FYI – I am not sure what this means in terms of whether they are actually drafting letters?! And note that there is another letter in the list he replies back with that we do not have record of.

Hopefully I will gain clarity after speaking with Daniel.

Cheers
Lisa

From: Jaremek, Daniel
Sent: August-03-18 8:39 AM
To: Jones, Lisa Ann
Cc: pac.prmc / pac.urpcm (DFO/MPO)
Subject: RE: External Review of Draft Recovery Strategy

Hi Lisa Ann,

I'm just running into a quick meeting. I'll call you in a bit to discuss.

I have attached the incomings to the letters you described for now. Note that the [redacted] letters we treated as a generic request to meet and not as input into the consultation, so you may have received something else from them, outside of the Ministerial Correspondence Unit Process.

- West Coast Aquatic [redacted]
- Sport Fishing Advisory Board [redacted]
- District of Ucluelet [redacted]
- BC Chamber of Commerce [redacted]
- Port Renfrew Chamber of Commerce [redacted]
- [redacted]

Talk soon,

Daniel

From: Jones, Lisa Ann
Sent: August-03-18 11:31 AM
To: Jaremek, Daniel
Cc: pac.prmc / pac.urpcm (DFO/MPO)

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s.21(1)(a)

s.21(1)(b)

Subject: RE: External Review of Draft Recovery Strategy
Importance: High

Hi Daniel,

Just following up on this.

We at SAR Pacific Region have been drafting all the responses needed to letters received regarding the Amended Recovery Strategy for Resident Killer Whales, including those that were addressed to the Minister as per direction that these letters were being referred to the SAR Pacific Region for response. However we have only received notification of one letter being referred to the region (from West Coast Aquatic).

1.

- West Coast Aquatic
- Sport Fishing Advisory Board
- District of Ucluelet
- BC Chamber of Commerce
- Port Renfrew Chamber of Commerce
-

FYI: We have drafted response letters to these groups and and are awaiting regional approval for sending – they are expected to be sent out early next week.

2.

Cheers
Lisa

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: July-27-18 9:23 AM
To: Jones, Lisa Ann
Subject: FW: External Review of Draft Recovery Strategy

Hi Lisa Ann,

Here is the response from Ottawa. I would suggest that Daniel Jaremek would be your contact for futher questions.

Thanks,

Heather

From: Jaremek, Daniel
Sent: July-27-18 9:22 AM
To: pac.prmc / pac.urpcm (DFO/MPO) <XPAC.PRMCU@dfo-mpo.gc.ca>
Subject: RE: External Review of Draft Recovery Strategy

Yes.

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[redacted]

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: July-27-18 12:21 PM
To: Jaremek, Daniel
Subject: FW: External Review of Draft Recovery Strategy
Importance: High

s.21(1)(a)
s.21(1)(b)

Hi Daniel,

I assume that Candace emailed about this earlier in the week. Can I give the folks in PAC SARA your name to contact to clarify the process since PRMCU is out of this loop.

Heather

From: Jones, Lisa Ann
Sent: July-27-18 9:13 AM
To: pac.prmc / pac.urpcm (DFO/MPO) <XPAC.PRMCU@dfo-mpo.gc.ca>
Cc: Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>
Subject: RE: External Review of Draft Recovery Strategy

Hi Candace,

Have you heard back on this issue? If there has been no correspondence sent in response to letters addressed to the ministers then we will need to address this in our letters. We would like to have confirmation on this process – is this something we can call to ask about for clarity?

Just want to be sure that we are covering our bases ☺

Cheers
Lisa

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: July-25-18 1:45 PM
To: Jones, Lisa Ann
Subject: FW: External Review of Draft Recovery Strategy

Hi Lisa.
I don't think we can assume that the writer didn't received a "Thanks...I've forwarded" response. I am checking in with Ottawa to confirm, but we went back and forth with them on a referral letter, so I'm pretty sure they're sending one.

I am assuming that the mechanism they are using to forward the letter to you is what is different from what we expected—that they're sending the email as below rather than just copying you on their response.

I'll let you know when I hear back.

Candace

From: Jones, Lisa Ann
Sent: Wednesday, July 25, 2018 1:35 PM
To: pac.prmc / pac.urpcm (DFO/MPO)

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Cc: Shaikh, Sharlene
Subject: FW: External Review of Draft Recovery Strategy

Hi Candace,

So we just got this into our SARA inbox. This seems to indicate that they (Minister office) have not sent out any notification to the respondent to indicate that they have referred this letter on to PAC SARA and are not planning on doing so.

Can you clarify……would your group be sending this type of notification? Or do we (PAC SARA) need to send a 'thank you for your letter, a more fulsome reply to your letter is pending' given we won't have letters out until next week.

Cheers
Lisa

From: PAC-SARA / LEP-PAC (DFO/MPO)
Sent: July-25-18 12:49 PM
To: Shaikh, Sharlene
Cc: Jones, Lisa Ann; Brekke, Heather
Subject: FW: External Review of Draft Recovery Strategy

Information only, as the need for a Pacific response is noted in the tracking sheet.
Response now actioned to Pacific. Note that it does not appear that NHQ is sending a "Thank You...detailed response forthcoming from Pacific Region" letter to senders.

Jonathan

From: Minister / Ministre (DFO/MPO)
Sent: July-25-18 11:05 AM
To: PAC-SARA / LEP-PAC (DFO/MPO)
Subject: FW: External Review of Draft Recovery Strategy

The following correspondence was received at min@dfo-mpo.gc.ca, the departmental email address for the Minister of Fisheries, Oceans and the Canadian Coast Guard. It is being sent to you for your action, as appropriate. No further action on this correspondence will be taken by the Ministerial Correspondence Control Unit.

Thank you.

Ministerial Correspondence Unit
Fisheries and Oceans Canada / Government of Canada
MCCU Analyst Group: XNCR-GrpCA/AC@dfo-mpo.gc.ca

La correspondance suivante a été reçue à min@dfo-mpo.gc.ca, l'adresse électronique du ministre des Pêches, des Océans et de la Garde côtière canadienne. Elle vous est transmise afin que vous preniez les mesures appropriées. Aucune autre mesure ne sera prise par l'Unité du contrôle de la correspondance ministérielle à l'égard de cette correspondance.

Merci.

Unité de la correspondance ministérielle
Pêches et Océans Canada / Gouvernement du Canada

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Groupe analyste d'UCCM: XNCR-GrpCA/AC@dfo-mpo.gc.ca

From:
Sent: July-11-18 7:48 PM
To: ec.ministre-minister.ec@canada.ca; Minister / Ministre (DFO/MPO)
Cc: Brekke, Heather; McMillan, Christie; PAC-SARA / LEP-PAC (DFO/MPO)
Subject: External Review of Draft Recovery Strategy

Hello Ministers McKenna and LeBlanc. Thank you for your consideration of the attached letter that has been sent on behalf of:

- West Coast Aquatic Governance Board
- West Coast Fishing Guides Association
- Alberni Sport Fish Advisory Committee
- Area G Trollers Association
- BC Commercial Fishing Caucus

We look forward to your response.

Sincerely,

West Coast Aquatic
Cell
www.westcoastaquatic.ca
www.roundtables.westcoastaquatic.ca
https://marineguide.ca

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Dozie, Juachi

From: Girouard, Louise
Sent: August-03-18 12:50 PM
To: Davies, Leri; Cottrell, Paul; Thornton, Sheila
Cc: Bate, Dan
Subject: RE: J50 + NOAA

Hi Leri, would be great if we could add to the story. Either in writing or via interview if we have any details to share.

L

From: Davies, Leri
Sent: Friday, August 3, 2018 12:07 PM
To: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>
Cc: Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>; Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>
Subject: FW: J50 + NOAA
Importance: High

Hi Paul/Sheila,

Media request – I am not in the office today so not sure if you have connected with Louise re: any sensitivities around our role in this?

From: [redacted]
Sent: 2018-August-03 12:01 PM
To: RHQ - Media.PAC
Subject: J50 + NOAA

Hi there,
I'm interested in an interview with someone about whether DFO is playing any role in NOAA's efforts to feed/treat J50 and if so, what are you doing/ what's the process. We already have a story out through our partner the Associated Press, so I can add DFO into the story as soon as someone is available for an interview.
Many thanks,

[redacted] | thecanadianpress.com

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Dozie, Juachi

From: Davies, Leri
Sent: August-03-18 4:27 PM
To: Girouard, Louise; Bate, Dan
Cc: Cottrell, Paul
Subject: RE: J50 + NOAA

Hi both,

FYI – Paul is calling [redacted] as we speak. Best, Leri

From: Davies, Leri
Sent: 2018–August-03 4:02 PM
To: Cottrell, Paul
Cc: Girouard, Louise; Bate, Dan
Subject: FW: J50 + NOAA
Importance: High

Hi Paul,

Reporter still interested. Best, Leri

From: [redacted]
Sent: 2018–August-03 3:26 PM
To: Davies, Leri
Subject: RE: J50 + NOAA

Hi Leri,
Thanks for your help on this. Any word? I've got two NOAA officials, but hoping to add DFO's voice in as soon as we can, for our east coast clients. Thanks!
[redacted]

From: Davies, Leri <Leri.Davies@dfo-mpo.gc.ca>
Sent: Friday, August 03, 2018 12:05 PM
To: [redacted]
Cc: RHQ - Media.PAC <Media.PAC@dfo-mpo.gc.ca>
Subject: RE: J50 + NOAA

Hi [redacted]

I will see if we have someone available and get back to you shortly. Best, Leri

---

From: [redacted]
Sent: 2018–August-03 12:01 PM
To: RHQ - Media.PAC
Subject: J50 + NOAA

Hi there,

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I'm interested in an interview with someone about whether DFO is playing any role in NOAA's efforts to feed/treat J50 and if so, what are you doing/ what's the process. We already have a story out through our partner the Associated Press, so I can add DFO into the story as soon as someone is available for an interview.
Many thanks,

[redacted]
thecanadianpress.com

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Dozie, Juachi

From: Nollens, Hendrik [redacted]
Sent: August-03-18 7:01 PM
To: Jim McBain
Cc: John Durban - NOAA Federal; Stephen AGRI:EX Raverty; Kristin Wilkinson - NOAA Federal; Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael moore
Subject: Re: [EXTERNAL] Aerial images J50

Thank you, Jim. Infarction is listed as a differential diagnosis in the approved permit, but I did not call out erysipelas specifically. Let me know if there are other things you'd like me to add? We still have some edits and updates to add to the permit, so I can easily add.
-Hendrik.

[redacted]

On Aug 3, 2018, at 3:37 PM, Jim McBain [redacted] wrote:

> Hi All,
> Someone may have already said this; I haven't been able to go through all of the email yet. The lesions that appear to be present on the August photo of J50 look like infarction lesions. The lesion near the blowhole looks similar to the apparent lesions affecting the flukes. I've seen flukes that look much like those in the photo in some stranded (and captive) Tursiops. The outcome if the animal survives is often loss of some part of or all of the fluke blades. The possibility of giving J50 antibiotics seems remote but could be life saving. I would be surprised if J50 has any appetite remaining so food may not be an effective route for administration of medication. If there is any possibility of administering antibiotics, I would include Erysipelothrix in my list of possible organisms.
> Jim
>
> On Thu, Aug 2, 2018 at 8:49 AM, John Durban - NOAA Federal [redacted] wrote:
> Yes - I think so. We have other images that will show this, and we will get more.
> - - - -
>
> **John W. Durban, Ph.D.**
>
> Leader, Cetacean Health and Life History Program
> NOAA Southwest Fisheries Science Center
> 8901 La Jolla Shores Drive, La Jolla, CA 92037
> Tel. 858-334-2866
>
> **https://swfsc.noaa.gov/MMTD-CHLHP**

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On Aug 2, 2018, at 8:15 AM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

Hendrik and John
Is there some discoloration or opacity of the dorsal surfaces of the flukes as well?
S

From: Nollens, Hendrik [mailto:
Sent: Thursday, August 2, 2018 8:03 AM
To: John Durban - NOAA Federal; Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Raverty, Stephen AGRI:EX; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; eri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: RE: [EXTERNAL] Aerial images J50

I'll let other vets weight in, but the white patch is likely a yeast plaque. *Candida* spp or similar. Yeast overgrowth of the upper respiratory tract may explain the bad breath that has been noted, although the bad breath can be a side effect from inappetence as well. If a yeast plaque is present around the blowhole, the yeast has likely also invaded the upper respiratory tract (nares, paranasal diverticula) and probably the lower respiratory tract (bronchi, lungs). We don't typically think of a yeast as a primary cause of illness, but it is a clear sign of how compromised J50 is. She probably also has pneumonia and is in my opinion not likely survive without help.

From: John Durban - NOAA Federal [mailto
Sent: Thursday, August 02, 2018 8:01 AM
To: Nollens, Hendrik; Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Stephen AGRI:EX Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: RE: [EXTERNAL] Aerial images J50

It is real.

On August 2, 2018 7:34:33 AM "Nollens, Hendrik" wrote:

> Hi John,
>
> Thank you for sharing. This confirms what Ken said in his last email; not good. Is the white patch behind her blowhole an artifact or is it real?
>
> --HN.

From: John Durban - NOAA Federal [mailto:
Sent: Thursday, August 02, 2018 7:14 AM
To: Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Nollens, Hendrik; Stephen AGRI:EX Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah

s.19(1)

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Fauquier; [redacted] Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: [EXTERNAL] Aerial Images J50

Dear Colleagues,

Images from SR3 and NOAA, not for distribution
Note that I have copied Michael, Lessana and Frances - additional vets that we have been engaging in discussions of SRKW condition

Holly and I managed to obtain some aerial images of some J and L pod whales yesterday, including the J16s. It was very challenging wind and glare conditions, but nonetheless we wanted to share some first aerial images of J50's body condition. Attached here is an image that compares her vertical photograph with one taken in May 2017, when she was at her previously worst measure of body condition (see email below for a plot and description of body condition measures).

As you can see, the aerial comparison is concerning. In addition to a clear "peanut head", J50 has lost condition along the body axis (note particularly around the dorsal fin). I would also note that she was not in robust condition compared to others in her cohort in 2017, so the baseline image here isn't good condition.

We have been a bit rushed since getting in late last night so my apologies we didn't find our best shot from 2017 for comparison, but I think the difference is clear. We aim to get clearer images of her current condition, and other SRKWs, in the next few days and will provide updated image comparisons and quantitative measurements. When we get some time (likely this afternoon) Holly will update the plot below with condition measures for all the J16s.

We hope to be on the call today, but it depends on what we find on there boat.

Best Wishes, John

<image001.jpg>
- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

Begin forwarded message:

From: John Durban - NOAA Federal [redacted]
Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition
Date: July 25, 2018 at 10:15:31 AM PDT

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To: Joe Gaydos [redacted]
Cc: brad hanson [redacted], Mike Ford [redacted], Candi Emmons [redacted] Lynne Barre [redacted], Ken Balcomb [redacted] Hendrik Nollens [redacted], "Stephen AGRI:EX Raverty" <stephen.raverty@gov.bc.ca>, Linda Rhodes [redacted], Sheila Thornton <Sheila.Thornton@dfo-mpo.gc.ca>, Paul Cottrell <Paul.Cottrell@dfo-mpo.gc.ca>, Holly Fearnbach [redacted], Lance Barrett-Lennard [redacted], Lisa Ballance [redacted]

Please note I am copying Holly and Lance here - my collaborators on body condition measures from recent UAS-based aerial photogrammetry.

Attached is a plot of our Eye Patch Ratio (EPR; Fearnbach et al. unpublished data) for each of the members of the J16 matriline over repeated photogrammetry measurements from September 2015, May 2016, September 2016, May 2017 and September 2017. Our ongoing data analyses indicate this EPR measure is our most sensitive measure of body condition (basically fatness behind the head), which gives us the greatest power (lowest CV in repeat measurements) to detect differences over time. Vertical error bars are SD of repeat measurements in each sampling period. Horizontal lines link the same individual over time.

The BLACK line is J50. You will see that she was in significantly poorer condition in each of our last two sampling periods in 2017.

Note that the very low measure in September 2017 was J52, another calf of the same cohort, that died within weeks of our sampling, We hope we don't see J50 measuring to be this emaciated when we begin sampling in early September, and hope she is still around then.

Please note, these data are unpublished, but are provided to facilitate our discussion tomorrow. Please do not use or distribute without permission.

Thanks, John

<image002.jpg>
- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
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8901 La Jolla Shores Drive, La Jolla, CA 92037
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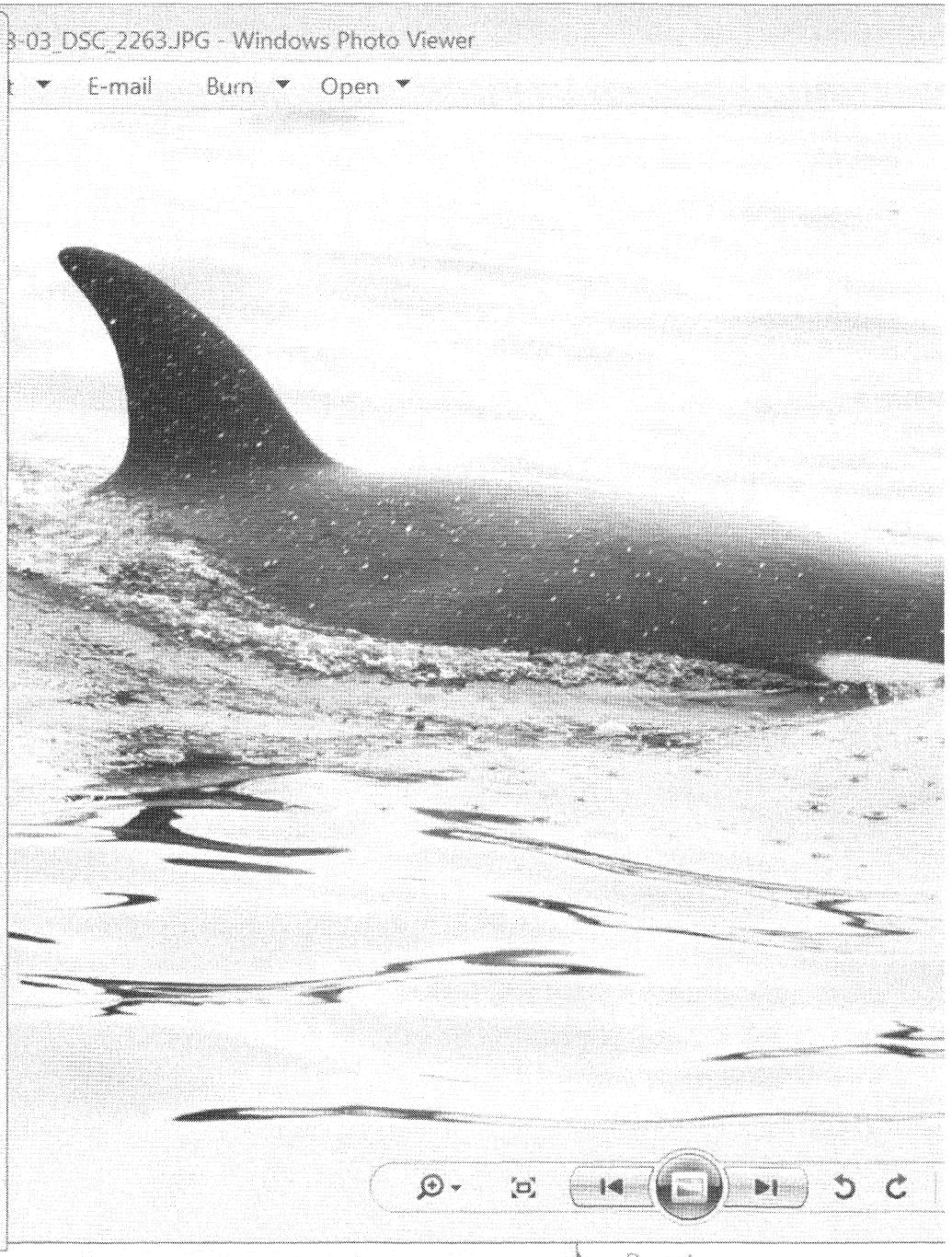

Recent

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Dozie, Juachi

From: Teri Rowles - NOAA Federal <[redacted]
Sent: August-03-18 5:15 AM
To: Holly Fearnbach
Cc: John Durban - NOAA Federal; Kristin Wilkinson - NOAA Federal; Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Hendrik Nollens; Stephen AGRI:EX Raverty; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; [redacted] Lesanna Lahner; Frances Gulland; Michael Moore;
Subject: Re: Aerial images J50

Thank you Holly for all the hard work on analyses.

[redacted]

On Aug 3, 2018, at 2:31 AM, Holly Fearnbach <[redacted] wrote:

Hi all,

Attached is our updated plot of photogrammetry measures over time for the J16s. This is a plot our Eye Patch Ratio (EPR; Fearnbach et al. unpublished data) for each of the members of the J16 matriline over repeated photogrammetry measurements since September 2015. Vertical error bars are SD of repeat measurements in each sampling period. Horizontal lines link the same individual over time. I have updated all the whales with the measurements we have (so far) from this week. J50 is indicated by the black line. As you can see, her condition has declined to similar levels reached by her cousin (J52) shortly before his death in 2017.

hf

Holly Fearnbach, Ph.D.

Marine Mammal Research Director
SR3, SeaLife Response, Rehabilitation and Research
Tel 808-281-7461; [redacted]

<hipdfjmgmnidnama.png>

On 8/2/2018 7:13 AM, John Durban - NOAA Federal wrote:

Dear Colleagues,

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Note that I have copied Michael, Lessana and Frances - additional vets that we have been engaging in discussions of SRKW condition

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condition (see email below for a plot and description of body condition measures).

As you can see, the aerial comparison is concerning. In addition to a clear "peanut head", J50 has lost condition along the body axis (note particularly around the dorsal fin). I would also note that she was not in robust condition compared to others in her cohort in 2017, so the baseline image here isn't good condition.

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We hope to be on the call today, but it depends on what we find on there boat.

Best Wishes, John

<J50 aerials.jpeg>
- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

Begin forwarded message:

From: John Durban - NOAA Federal <
Subject: **Re: Thursday 8AM call to discuss concerns about J50's nutritional condition**
Date: July 25, 2018 at 10:15:31 AM PDT
To: Joe Gaydos
Cc: brad hanson Mike Ford <
Candi Emmons <>, Lynne Barre
Ken Balcomb <, Hendrik
Nollens <, "Stephen AGRI:EX Raverty"
<stephen.raverty@gov.bc.ca>, Linda Rhodes >, Sheila
Thornton <Sheila.Thornton@dfo-mpo.gc.ca>, Paul Cottrell <Paul.Cottrell@dfo-mpo.gc.ca>, Holly Fearnbach , Lance Barrett-
Lennard , Lisa Ballance

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

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Attached is a plot of our Eye Patch Ratio (EPR; Fearnbach et al. unpublished data) for each of the members of the J16 matriline over repeated photogrammetry measurements from September 2015, May 2016, September 2016, May 2017 and September 2017. Our ongoing data analyses indicate this EPR measure is our most sensitive measure of body condition (basically fatness behind the head), which gives us the greatest power (lowest CV in repeat measurements) to detect differences over time. Vertical error bars are SD of repeat measurements in each sampling period. Horizontal lines link the same individual over time.

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Please note, these data are unpublished, but are provided to facilitate our discussion tomorrow. Please do not use or distribute without permission.

Thanks, John

<J50 EPR.jpeg>

- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

<J16s through August 2018.jpeg>

001253

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s.19(1)

Dozie, Juachi

From: Kristin Wilkinson - NOAA Federal [redacted]>
Sent: August-03-18 10:09 PM
To: Katy Foster; Brad Hanson (NOAA Federal); Giles; Holly Fearnbach; [redacted] John Durban - NOAA Federal; Marty Haulena; Deborah Giles; jeff foster; Joseph Karl Gaydos; [redacted] Jim McBain
Cc: Lynne Barre - NOAA Federal; Teri Rowles; Deborah Fauquier; Barry Thom - NOAA Federal; Scott Rumsey - NOAA Federal; Cottrell, Paul; Chris Yates - NOAA Federal; Forbes Darby; Ruth Howell; Thornton, Sheila; Michael Milstein - NOAA Federal; Jim Milbury - NOAA Federal; Becker, Penny A (DFW)
Subject: Daily Debrief for Weekend Response Activities, 503-326-7672

Good Evening Everyone -

I apologize for the multiple notifications via Google calendar this evening, it seems to have added an extra number! Just to be clear, the evening debrief call will take place on 503-326-7672. If you're part of the field team and you can't make it, please give me a call in advance to make me aware of your activities. I'll be sending out an update to this email chain after the evening debrief call so you'll still be in the loop if you can't hop on.

Field Teams: Two incredible support vessels were offered to the response team today - they are listed under Resources on our Google Drive. They are on standby if we need their help but I think we've got it covered for the weekend sampling, health assessment, and UAS activities.

Let's hope for a productive day tomorrow,

Kristin

On Fri, Aug 3, 2018 at 5:32 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Hi All,

As you all know there is an incredible amount of interest in J50 and our field response plans. I would like to request an evening debrief on Saturday and Sunday night at 9:00pm. I understand this is inconvenient to everyone's schedule but I have timed it after sunset when hopefully everyone will be off the water. This will allow us to hop on a quick call and discuss what was accomplished during the day.

I have been asked to prepare daily evening updates to NOAA leadership and to our Communications Team and this call will help me accomplish that so everyone is informed and on the same page.

Please call into: 503-326-7672

Thank you everyone for all of your work and dedication to responding to J50. Please don't hesitate to reach out to me at [redacted] if you have any questions.

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division

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West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

--

Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

s.19(1) s.21(1)(a)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-03-18 7:42 AM
To: Thornton, Sheila
Subject: Fw: Emergency response to J50

Hi Sheila,
[redacted] See press release below. I missed the expert call on this yesterday as we were herding T23b out of Comox harbour. Are you available for a call some time today to discuss. I have suggested a call with NOAA Tuesday to coordination things, which would include media, licencing, potential actions, role of expert group to inform DFO/NOAA. I want to make sure we are on the same page which we usually are :)
Best,
Paul
Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Michael Milstein - NOAA Federal [redacted]
Sent: Friday, August 3, 2018 12:34 AM
To: Sloan, Lara; Cottrell, Paul
Cc: Lynne Barre - NOAA Federal
Subject: Emergency response to J50

Hi Lara and Paul,

You are probably aware of this by now but we are considering whether it makes sense to attempt some sort of action to help J50.

See The Seattle Times article tonight.

This story came out faster than we expected, so sorry for the late notice.

We would like to stay in close coordination with you at DRO on this as it develops, as the whales have been moving back and forth across the border. This will be especially valuable in terms of communications to the press. Are you developing talking points or anything similar on this issue?

Please let me know if there is anything I can do to help or assist you.

Best
Michael

--
Michael Milstein
Public Affairs Officer
NOAA Fisheries
West Coast Region, Northwest Fisheries Science Center, Southwest Fisheries Science Center

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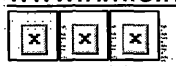
Office: 503-231-6268
Cell: [redacted]

Find us online
www.nmfs.noaa.gov



s.21(1)(a) s.21(1)(b)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-03-18 7:33 AM
To: Girouard, Louise
Subject: Re: Media update with Paul Cottrell and Jared Towers and possibly fishery officer Wayne Johnston re: good news concerning the Orca in Comox Harbour

You bet, there are many suggested intervention actions in the NOAA press release, [redacted] The NOAA press release is going to create lots of questions from the media on both sides of the border. There have been several conference calls with experts and MM management folks on both sides of the border to discuss J50 but the intervention side it is really only at the exploratory stage. [redacted] Hope this is helpful.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Girouard, Louise
Sent: Friday, August 3, 2018 7:25 AM
To: Cottrell, Paul; Davies, Leri; Davies, Leri
Cc: Malikian, Janine
Subject: Re: Media update with Paul Cottrell and Jared Towers and possibly fishery officer Wayne Johnston re: good news concerning the Orca in Comox Harbour

Thanks Paul. That is such good news.
We will be in touch with any requests.
I wouldn't mind getting your take on next steps regarding J50 attempts ahead of your call on Tuesday.

If you have a moment at some point today.

Cheers,

Louise

From: Cottrell, Paul
Sent: Friday, August 3, 2018 7:18 AM
To: Davies, Leri; Davies, Leri
Cc: Malikian, Janine; Girouard, Louise
Subject: Re: Media update with Paul Cottrell and Jared Towers and possibly fishery officer Wayne Johnston re: good news concerning the Orca in Comox Harbour

Great news! Just heard T73b was seen heading north at Discovery Pier last night, looks like he is booking it north which is great. I'm still in Comox this morning heading back to Vancouver later this morning if you need

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me for any media on the issue let me know. Thanks so much for all your coordination and efforts on media side for this operation, it has been awesome!
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Davies, Leri
Sent: Thursday, August 2, 2018 4:44 PM
To: Davies, Leri
Cc: Malikian, Janine; Girouard, Louise
Subject: Media update with Paul Cottrell and Jared Towers and possibly fishery officer Wayne Johnston re: good news concerning the Orca in Comox Harbour

I apologise for the short notice but if you can make a conference call at 5 p.m. this afternoon we will have the DFO folks from Science, Marine Mammals and Conservation and Protection to talk about their innovative coordinated effort this afternoon to lure the Orca from Comox Harbour.

Call:
1 877 413 4788

I.D. #
[redacted]

Paul and Jared can lead you through the timeline and talk the science, enforcement and whale marine mammal expertise involved. After that they will take questions. Best, Leri

Leri Davies,
Strategic Media Relations Advisor/Conseillère stratégique avec les médias,
Fisheries and Oceans Canada, Pacific Region / Pêche et Océans Canada, région du pacifique
200 - 401 rue Burrard St., Vancouver, BC V6C 3S4
Tel. / tél.: (604) 666-8675
Cell / cellulaire: [redacted]
Fax / téléc. : (604) 666-1847
e-mail / courriel : leri.davies@dfo-mpo.gc.ca
Government of Canada / Gouvernement du Canada
Canada
Follow us on Twitter! http://twitter.com/DFO_Pacific
Suivez-nous sur Twitter! http://twitter.com/MPO_Pacifique

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Dozie, Juachi

From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: August-04-18 10:10 AM
To: 'Holly Fearnbach'
Cc: John Durban; Cottrell, Paul; Raverty, Stephen AGRI:EX
Subject: RE: Aerial images J50

Hi Holly and John,
Firstly, thank you for your participation and contribution to the health assessment of J50. The detailed images, EPR plot and your insights through the conference call discussions are invaluable.

We are writing to ask your permission to share the images below with John Ford and Graeme Ellis. The lesion behind the blowhole is unusual and something not previously encountered in post mortem case material with stranded kw's in the northeastern Pacific. If agreeable, would you please forward the images to John and Graeme for review.

John's email is [redacted] and Graeme may be [redacted]

Thank you and we wish you both continued success with your research efforts.
Kindest regards,
Paul and Stephen

From: Holly Fearnbach [mailto:[redacted]
Sent: Thursday, August 2, 2018 11:32 PM
To: John Durban - NOAA Federal; Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Hendrik Nollens; Raverty, Stephen AGRI:EX; Linda Rhodes; Sheila Thornton; Paul Cottrell; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; [redacted] Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore; [redacted]
Subject: Re: Aerial images J50

Hi all,

Attached is our updated plot of photogrammetry measures over time for the J16s. This is a plot our Eye Patch Ratio (EPR; Fearnbach et al. unpublished data) for each of the members of the J16 matriline over repeated photogrammetry measurements since September 2015. Vertical error bars are SD of repeat measurements in each sampling period. Horizontal lines link the same individual over time. I have updated all the whales with the measurements we have (so far) from this week. J50 is indicated by the black line. As you can see, her condition has declined to similar levels reached by her cousin (J52) shortly before his death in 2017.

hf

Holly Fearnbach, Ph.D.

Marine Mammal Research Director
SR3, SeaLife Response, Rehabilitation and Research
Tel 808-281-7461; [redacted]

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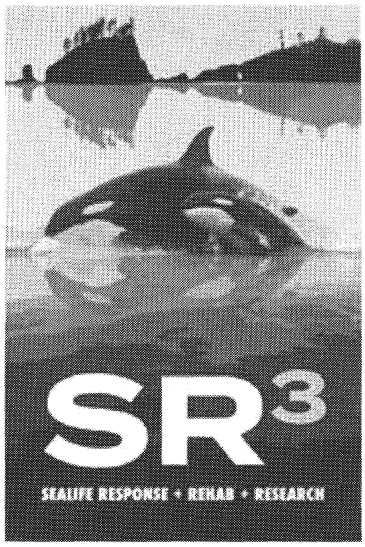

On 8/2/2018 7:13 AM, John Durban - NOAA Federal wrote:

Dear Colleagues,

Images from SR3 and NOAA, not for distribution
Note that I have copied Michael, Lessana and Frances - additional vets that we have been engaging in discussions of SRKW condition

Holly and I managed to obtain some aerial images of some J and L pod whales yesterday, including the J16s. It was very challenging wind and glare conditions, but nonetheless we wanted to share some first aerial images of J50's body condition. Attached here is an image that compares her vertical photograph with one taken in May 2017, when she was at her previously worst measure of body condition (see email below for a plot and description of body condition measures).

As you can see, the aerial comparison is concerning. In addition to a clear "peanut head", J50 has lost condition along the body axis (note particularly around the dorsal fin). I would also note that she was not in robust condition compared to others in her cohort in 2017, so the baseline image here isn't good condition.

We have been a bit rushed since getting in late last night so my apologies we didn't find our best shot from 2017 for comparison, but I think the difference is clear. We aim to get clearer images of her current condition, and other SRKWs, in the next few days and will provide updated image comparisons and quantitative measurements. When we get some time (likely this afternoon) Holly will update the plot below with condition measures for all the J16s.

We hope to be on the call today, but it depends on what we find on there boat.

Best Wishes, John

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- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

Begin forwarded message:

From: John Durban - NOAA Federal [redacted]

Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition

Date: July 25, 2018 at 10:15:31 AM PDT

To: Joe Gaydos [redacted]

Cc: brad hanson [redacted], Mike Ford [redacted], Candi Emmons [redacted], Lynne Barre [redacted] Ken Balcomb [redacted] Hendrik Nollens [redacted], "Stephen AGRI:EX Raverty" <stephen.raverty@gov.bc.ca>, Linda Rhodes [redacted] Sheila Thornton <Sheila.Thornton@dfo-mpo.gc.ca>, Paul Cottrell <Paul.Cottrell@dfo-

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mpo.gc.ca>, Holly Fearnbach [redacted], Lance Barrett-Lennard [redacted], Lisa Ballance [redacted]

Please note I am copying Holly and Lance here - my collaborators on body condition measures from recent UAS-based aerial photogrammetry.

Attached is a plot of our Eye Patch Ratio (EPR; Fearnbach et al. unpublished data) for each of the members of the J16 matriline over repeated photogrammetry measurements from September 2015, May 2016, September 2016, May 2017 and September 2017. Our ongoing data analyses indicate this EPR measure is our most sensitive measure of body condition (basically fatness behind the head), which gives us the greatest power (lowest CV in repeat measurements) to detect differences over time. Vertical error bars are SD of repeat measurements in each sampling period. Horizontal lines link the same individual over time.

The BLACK line is J50. You will see that she was in significantly poorer condition in each of our last two sampling periods in 2017.

Note that the very low measure in September 2017 was J52, another calf of the same cohort, that died within weeks of our sampling, We hope we don't see J50 measuring to be this emaciated when we begin sampling in early September, and hope she is still around then.

Please note, these data are unpublished, but are provided to facilitate our discussion tomorrow. Please do not use or distribute without permission.

Thanks, John

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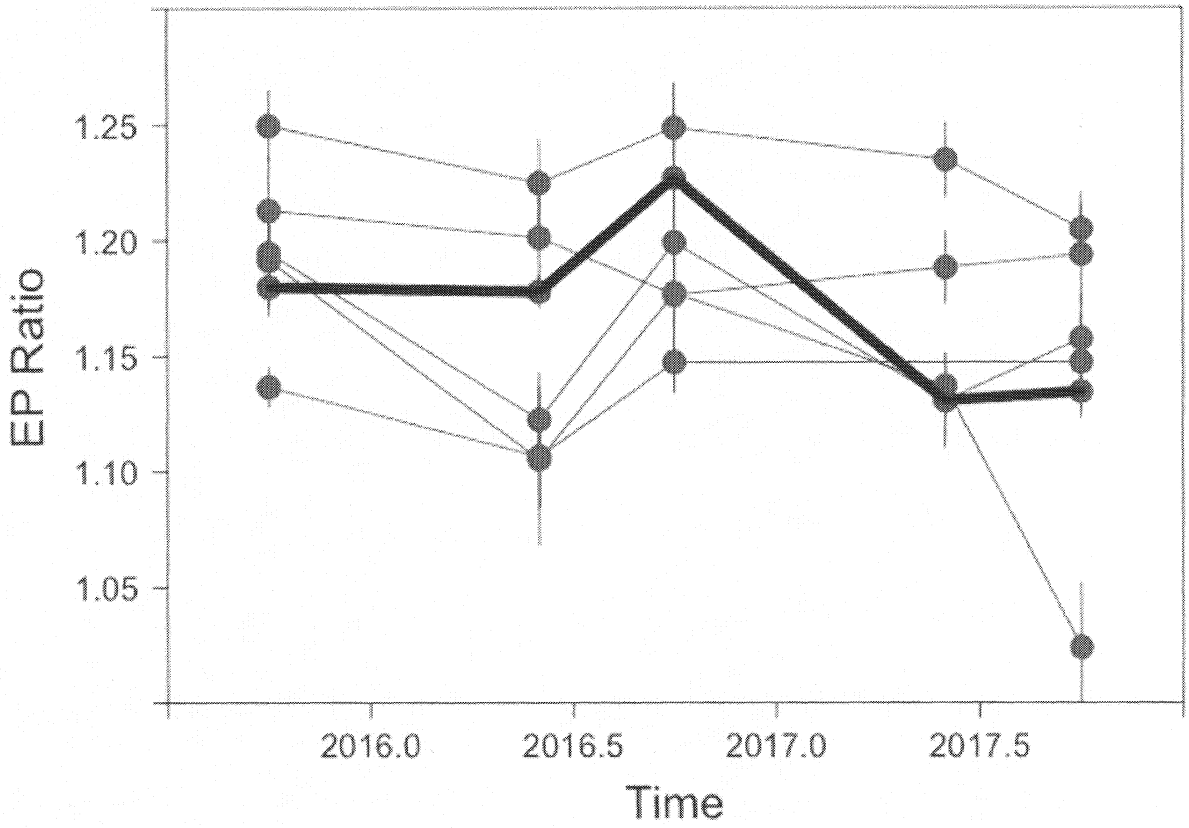

- - - -

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Dozie, Juachi

From: Holly Fearnbach [redacted]
Sent: August-04-18 11:10 AM
To: Raverty, Stephen AGRI:EX
Cc: John Durban; Cottrell, Paul
Subject: Re: Aerial images J50

They headed out late Wednesday, so we haven't had another chance to fly over them. Hoping to get another chance today or tomorrow if they come back. Fingers crossed!

[redacted]

On Aug 4, 2018, at 10:55 AM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

> Wonderful, thank you Holly and John. Are you getting a better perspective/image of the white discolored area behind the blowhole?
> Stephen

From: Holly Fearnbach [redacted]
Sent: Saturday, August 4, 2018 10:54 AM
To: Raverty, Stephen AGRI:EX
Cc: John Durban; Cottrell, Paul
Subject: Re: Aerial images J50

Thank you Stephen. We would be happy to share the images and will send them tonight (we are currently on the water). Please let us know if you need anything else.

Take care,

hf

[redacted]

On Aug 4, 2018, at 10:09 AM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

> Hi Holly and John,
> Firstly, thank you for your participation and contribution to the health assessment of J50. The detailed images, EPR plot and your insights through the conference call discussions are invaluable.
>
> We are writing to ask your permission to share the images below with John Ford and Graeme Ellis. The lesion behind the blowhole is unusual and something not previously encountered in post mortem case material with stranded kw's in the northeastern Pacific. If agreeable, would you please forward the images to John and Graeme for review.

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John's email is [redacted] and Graeme may be [redacted]

Thank you and we wish you both continued success with your research efforts.
Kindest regards,
Paul and Stephen

From: Holly Fearnbach [mailto:[redacted]
Sent: Thursday, August 2, 2018 11:32 PM
To: John Durban - NOAA Federal; Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Hendrik Nollens; Raverty, Stephen AGRI:EX; Linda Rhodes; Sheila Thornton; Paul Cottrell; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; [redacted]eri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore; [redacted]
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hf
Holly Fearnbach, Ph.D.

Marine Mammal Research Director
SR3, SeaLife Response, Rehabilitation and Research
Tel 808-281-7461; [redacted]

<image002.jpg>

On 8/2/2018 7:13 AM, John Durban - NOAA Federal wrote:

> Dear Colleagues,
>
> **Images from SR3 and NOAA, not for distribution**
> *Note that I have copied Michael, Lessana and Frances - additional vets that we have been engaging in discussions of SRKW condition*
>
> Holly and I managed to obtain some aerial images of some J and L pod whales yesterday, including the J16s. It was very challenging wind and glare conditions, but nonetheless we wanted to share some first aerial images of J50's body condition. Attached here is an image that compares her vertical photograph with one taken in

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May 2017, when she was at her previously worst measure of body condition (see email below for a plot and description of body condition measures).

As you can see, the aerial comparison is concerning. In addition to a clear "peanut head", J50 has lost condition along the body axis (note particularly around the dorsal fin). I would also note that she was not in robust condition compared to others in her cohort in 2017, so the baseline image here isn't good condition.

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We hope to be on the call today, but it depends on what we find on there boat.

Best Wishes, John

<image004.jpg>
- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

Begin forwarded message:

From: John Durban - NOAA Federal [redacted]

Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition

Date: July 25, 2018 at 10:15:31 AM PDT

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To: Joe Gaydos [redacted]

Cc: brad hanson [redacted] Mike Ford [redacted], Candi Emmons [redacted] Lynne Barre [redacted], Ken Balcomb [redacted] Hendrik Nollens [redacted], "Stephen AGRI:EX Raverty" <stephen.raverty@gov.bc.ca>, Linda Rhodes [redacted] Sheila Thornton <Sheila.Thornton@dfo-mpo.gc.ca>, Paul Cottrell <Paul.Cottrell@dfo-mpo.gc.ca>, Holly Fearnbach [redacted] Lance Barrett-Lennard [redacted], Lisa Ballance [redacted]

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Thanks, John

<image005.jpg>
- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
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https://swfsc.noaa.gov/MMTD-CHLHP

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Dozie, Juachi

From: Joseph Karl Gaydos [redacted]
Sent: August-04-18 5:17 PM
To: John Durban - NOAA Federal
Cc: Hendrik Nollens; Kristin Wilkinson - NOAA Federal; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Stephen AGRI:EX Raverty; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Jim McBain; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael moore; Michael Milstein - NOAA Federal
Subject: Re: Clarification_Aerial images J50

Thank you for the clarification John.

On Aug 4, 2018, at 6:09 PM, John Durban - NOAA Federal [redacted] wrote:

> I just wanted to clarify something that may have been mistaken by folks not used to looking at aerial images. When Hendrik asked about a white patch behind the blowhole in our images, my response was not referring to the prominent white bubbles that are coming from the blowhole. This is normal exhalation - an instantaneous image of the whale exhaling before the blow is visible above the surface. We capture thousands of images like this every field effort.
>
> Rather, my response about white coloration referred to the apparent whiter or paler coloration to the skin behind the cranium and slightly to the left. Some of this is accentuated by glare in the image (a result of incident light and windy conditions) but other images appear to show that her skin in that area is not as dark as normal. Perhaps this is because of the depression behind the skull. We clearly need images in better light and water conditions to obtain a sharper view of J-50. Lets hope she comes back soon so we can obtain these.
>
> Thanks, John
>
> - - - -
>
> **John W. Durban, Ph.D.**
>
> Leader, Cetacean Health and Life History Program
> NOAA Southwest Fisheries Science Center
> 8901 La Jolla Shores Drive, La Jolla, CA 92037
> Tel. 858-334-2866
>
> **https://swfsc.noaa.gov/MMTD-CHLHP**
>
> On Aug 2, 2018, at 8:00 AM, John Durban - NOAA Federal [redacted] wrote:
>
> It is real.

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On August 2, 2018 7:34:33 AM "Nollens, Hendrik" [redacted] wrote:

Hi John,

Thank you for sharing. This confirms what Ken said in his last email; not good. Is the white patch behind her blowhole an artifact or is it real?

--HN.

From: John Durban - NOAA Federal [mailto:[redacted]
Sent: Thursday, August 02, 2018 7:14 AM
To: Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Nollens, Hendrik; Stephen AGRI:EX Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; [redacted] Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: [EXTERNAL] Aerial images J50

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Best Wishes, John

<image002.jpg>
- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program

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NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

Begin forwarded message:

From: John Durban - NOAA Federal <
Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition
Date: July 25, 2018 at 10:15:31 AM PDT
To: Joe Gaydos
Cc: brad hanson <, Mike Ford <, Candi Emmons <, Lynne Barre <, Ken Balcomb Hendrik Nollens , "Stephen AGRI:EX Raverty" <stephen.raverty@gov.bc.ca>, Linda Rhodes <, Sheila Thornton <Sheila.Thornton@dfo-mpo.gc.ca>, Paul Cottrell <Paul.Cottrell@dfo-mpo.gc.ca>, Holly Fearnbach , Lance Barrett-Lennard <, Lisa Ballance <

Please note I am copying Holly and Lance here - my collaborators on body condition measures from recent UAS-based aerial photogrammetry.

Attached is a plot of our Eye Patch Ratio (EPR; Fearnbach et al. unpublished data) for each of the members of the J16 matriline over repeated photogrammetry measurements from September 2015, May 2016, September 2016, May 2017 and September 2017. Our ongoing data analyses indicate this EPR measure is our most sensitive measure of body condition (basically fatness behind the head), which gives us the greatest power (lowest CV in repeat measurements) to detect differences over time. Vertical error bars are SD of repeat measurements in each sampling period. Horizontal lines link the same individual over time.

The BLACK line is J50. You will see that she was in significantly poorer condition in each of our last two sampling periods in 2017.

Note that the very low measure in September 2017 was J52, another calf of the same cohort, that died within weeks of our sampling, We hope we don't see J50 measuring to be this emaciated when we begin sampling in early September, and hope she is still around then.

Please note, these data are unpublished, but are provided to facilitate our discussion tomorrow. Please do not use or distribute without permission.

Thanks, John

<image003.jpg>
- - - -

John W. Durban, Ph.D.

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Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
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Tel. 858-334-2866

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Dozie, Juachi

From: Davies, Leri
Sent: August-04-18 11:34 AM
To: [redacted]
Subject: RE: Issue of urgent concern - Illegal salmon sales in the Lower Mainland over the long weekend and through the summer

Hi [redacted] will look into it for you and get back to you asap. Best, Leri

From: [redacted]
Sent: 2018–August-04 10:51 AM
To: Davies, Leri
Subject: RE: Issue of urgent concern - Illegal salmon sales in the Lower Mainland over the long weekend and through the summer

Hi Leri,

Thanks for reaching out about this.

We are also following up on the plan to save the female killer whale known as J50. Wondering if you or anyone else from Fisheries and Oceans Canada would be interested and available for an interview on that today? Is Paul Cottrell around?

Please let us know.

Thanks so much,

[redacted]
Global News, a division of Corus Entertainment Inc.
[redacted]

From: Davies, Leri [mailto:Leri.Davies@dfo-mpo.gc.ca]
Sent: Saturday, August 04, 2018 10:38 AM
To: Global BC NewsTips <globalbc.newstips@globaltv.com>
Subject: Issue of urgent concern - Illegal salmon sales in the Lower Mainland over the long weekend and through the summer
Importance: High

Good morning,

We are hoping that you could alert your audience to an urgent health and conservation concern around illegal salmon sales around the Lower Mainland over the long weekend, and through the summer, particularly in the Langley area.

Details:

Lower mainland fishery officers, particularly in Langley area, have been receiving a significant volume of public complaints around rampant and open illegal sales of fresh salmon. These sales not only represent a significant risk to human health, they also pose a considerable risk to salmon stocks that are vulnerable.

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There are currently no economic opportunity fisheries happening on the Fraser, just FSC, and the recreational fishery is closed due to concerns around Chinook salmon. There will be increased enforcement patrols by fishery officers.

- If you buy salmon from an unlawful source, not only do you run the risk of illness, fines and jail time - you harm the management of fisheries resources for the future.

- If you wish to purchase seafood from anyone, it is your responsibility to ensure that it was lawfully caught under a licence authorizing sale.

- Selling or buying seafood illegally may result in significant fines under the *Fisheries Act*, and/or fines under Provincial legislation. If you are caught purchasing, selling, trading or bartering seafood caught in a fishery where sales are not authorized, you could face fines as high as $100,000, and/or up to two years in jail.

- Depending on handling, processing, transport and storage - buyers of illegal seafood run the risk of ingesting fish that is contaminated or causes food poisoning.

- Illegal fish sales undermine the ability to manage fishery resources in a fair and equitable manner, now and into the future.

- If in doubt, ask what fishery the seafood has come from and request to see the commercial licence or Aboriginal Fishery Landing Slip.

- Buying fish over the Internet may be unlawful and a threat to your health. Ensure you buy seafood only from licensed reputable sources.

- If you see any illegal fisheries activity or illegal fish sales online, report it as soon as possible at: Observe, Record and Report (ORR) 1-800-465-4336, or your local DFO office.

Many thanks and best, Leri

Leri Davies,
Strategic Media Relations Advisor/Conseillère stratégique avec les médias,
Fisheries and Oceans Canada, Pacific Region / Pêche et Océans Canada, région du pacifique
200 - 401 rue Burrard St., Vancouver, BC V6C 3S4
Tel. / tél.: (604) 666-8675
Cell / cellulaire: [redacted]
Fax / téléc. : (604) 666-1847
e-mail / courriel : leri.davies@dfo-mpo.gc.ca

Government of Canada / Gouvernement du Canada

Canada

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Suivez-nous sur Twitter! http://twitter.com/MPO_Pacifique

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-04-18 1:10 PM
To: Thornton, Sheila; Raverty, Stephen AGRI:EX
Subject: Re: Lateral images of J50 - June, July, August

Yes, that would be prudent. Thanks you guys!

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Thornton, Sheila
Sent: Saturday, August 4, 2018 10:06 AM
To: Raverty, Stephen AGRI:EX
Cc: Cottrell, Paul
Subject: RE: Lateral images of J50 - June, July, August

Thank you for your response Stephen – I appreciate your opinion and approach.

Paul – I do think it would be prudent to discuss a permit for our crew to undertake breath samples/swabs, and we will continue to monitor J50 and collect fecal samples as the opportunity arises.

Kind regards,

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Raverty, Stephen AGRI:EX [mailto:Stephen.Raverty@gov.bc.ca]
Sent: August-04-18 9:59 AM
To: Thornton, Sheila
Cc: Cottrell, Paul
Subject: RE: Lateral images of J50 - June, July, August

Hi Sheila and Paul,
Thank you for the note below. We had previously sampled exhaled breath condensate to screen by routine bacterial and fungal culture, as well as PCR for specific disease agents (morbillivirus, Brucella spp). A number of bacteria and fungi were recovered from free ranging whales and with generalized debilitation or immunosuppression associated with the loss of condition as with J50, any of these microbes may post a threat to infection and clinical disease. The preparation of smears from blowhole breath condensate is critical to screen for evidence of active or more chronic inflammation and possible infection. The history of foul smelling breath is a concern and may suggestive tissue necrosis or bacterial putrefaction of the lung or upper respiratory system.

https://www.nature.com/articles/s41598-017-00457-5

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I had hoped that this same protocol may have been considered to collected breath samples, with dogs used to recover any scat from J50 that may be identified.

With the lesion associated behind the blowhole, I am not certain whether it is artifact associated with glare or a true abnormality. I have not yet seen follow up images from John or Heather, but hope that additional photographs may shed more insight into what may be going on there. Depending on the demeanor (avoidance behavior) and response to vessel approach, it may be possible to use a graphite pole with a sponge or other abrasive to scrape and remove a small sample of the affected tissue behind the blowhole of J50. However, without a biopsy and microscopic evaluation of the deeper affected tissue, it is difficult to determine what microbes might be superficial and secondary opportunists, versus true pathogens.

With a sick wild animal, I would be very cautious about any treatments administered either in live or fresh dead prey or by direct inoculation with a syringe. The cause of J50 illness has not yet been determined and the administration of water in fish may be palliative, but it is unlikely to effect a cure. Even if a specific disease agent is identified, without live capture and possible placement in a net pen for 5-10 days treatment, the likelihood of successful outcome would be guarded.

At this juncture a conservative plan would likely be the best approach with opportunistic field observations, collection of activity and respiratory rates, collection of scat and possibly a breath sample considered after discussion of all those involved.

Hope this helps
Stephen

From: Thornton, Sheila [mailto:Sheila.Thornton@dfo-mpo.gc.ca]
Sent: Saturday, August 4, 2018 8:36 AM
To: Raverty, Stephen AGRI:EX
Cc: Cottrell, Paul
Subject: RE: Lateral images of J50 - June, July, August

Hi Stephen,

I have been in discussion with Paul Cottrell re: DFO approach and permits to approach and swab, as this is not currently covered under our permit. Paul has arranged an internal call on Tuesday to discuss the permit and actions that could be allowed under SARA/MMR.

I'm not seeing the blow hole exudate/patch that others have commented on. I would appreciate your thoughts on this, as we discuss the DFO approach to the situation. Are you clearly able to see this lesion, or is it obscured by glare from the contours of the peanut head? Taking a swab from a lesion that I cannot clearly visualize seems to be a risky undertaking and quite stressful for the animal. If you could comment on the presence of this lesion, I would appreciate it.

What are your thoughts on the feasibility of provisioning sufficient medication over an extended period of time to treat any infection that may be diagnosed? Given that we have spent the last nine weeks on the water with these animals, with two vessels surveying from Swiftsure to Race Rocks, I can say with some certainty that the concept of daily dosages in the wild is not entirely realistic. Given the likelihood of sporadic dosing (at best), what kind of outcome could we foresee from a partial treatment regime? Separating her from her family has a whole other set of ramifications that would be quite worrisome, especially seeing the reaction of J35's family to the death of the calf.

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This is a difficult time and while I certainly feel the pressure to undertake some degree of action to save this animal, I do want to remain realistic with respect to outcomes.

Thank you in advance for any insight you can provide.

Kind regards,

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Raverty, Stephen AGRI:EX [mailto:Stephen.Raverty@gov.bc.ca]
Sent: August-04-18 8:17 AM
To: Thornton, Sheila
Subject: RE: Lateral images of J50 - June, July, August

Thank you Sheila, were you and Marty able to collect any samples?
Cheers
S

From: Thornton, Sheila [mailto:Sheila.Thornton@dfo-mpo.gc.ca]
Sent: Saturday, August 4, 2018 8:14 AM
To: Raverty, Stephen AGRI:EX; Frances Gulland; Cottrell, Paul; Marty Haulena; Nollens, Hendrik
Cc: John Durban - NOAA Federal; Kristin Wilkinson - NOAA Federal; Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Linda Rhodes; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; Jim McBain; Frances Gulland; Michael moore
Subject: Lateral images of J50 - June, July, August

Hello all,

I have uploaded some lateral images of J50 from June 24, July 9th, and August 3rd. I am not seeing the blowhole lesion as clearly as others; however, there is a scar/lesion on her left side directly below her dorsal fin just cranial to the saddle patch that may be of interest – please see the attached comparative photos from June to August, and some high resolution photos on the google drive.

Kind regards,

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

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s.19(1)

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Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Jim McBain [mailto
Sent: August-03-18 7:28 PM
To: Nollens, Hendrik
Cc: John Durban - NOAA Federal; Stephen AGRI:EX Raverty; Kristin Wilkinson - NOAA Federal; Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael moore
Subject: Re: [EXTERNAL] Aerial images J50

Hi Hendrik,
I mentioned Erysipelothrix primarily to be sure that any therapeutic effort would include a drug that is effective for that bug. The reality is that there are other bacteria and some fungi that could produce lesions like that. The one interesting characteristic of her disease is that it hasn't killed her yet. That leads me to suspect that the organism(s) involved aren't potent systemic toxin producers. Lots of guessing and lots of opportunity to be wrong.
Jim

On Fri, Aug 3, 2018, 7:00 PM Nollens, Hendrik < wrote:

> Thank you, Jim. Infarction is listed as a differential diagnosis in the approved permit, but I did not call out erysipelas specifically. Let me know if there are other things you'd like me to add? We still have some edits and updates to add to the permit, so I can easily add.
> -Hendrik.
>
>
> On Aug 3, 2018, at 3:37 PM, Jim McBain < wrote:
>
> > Hi All,
> > Someone may have already said this; I haven't been able to go through all of the email yet. The lesions that appear to be present on the August photo of J50 look like infarction lesions. The lesion near the blowhole looks similar to the apparent lesions affecting the flukes. I've seen flukes that look much like those in the photo in some stranded (and captive) Tursiops. The outcome if the animal survives is often loss of some part of or all of the fluke blades. The possibility of giving J50 antibiotics seems remote but could be life saving. I would be surprised if J50 has any appetite remaining so food may not be an effective route for administration of medication. If there is any possibility of administering antibiotics, I would include Erysipelothrix in my list of possible organisms.
> > Jim
> >
> > On Thu, Aug 2, 2018 at 8:49 AM, John Durban - NOAA Federal <
> > wrote:
> > Yes - I think so. We have other images that will show this, and we will get more.
> > - - - -
> >
> > **John W. Durban, Ph.D.**
> >
> > Leader, Cetacean Health and Life History Program

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https://swfsc.noaa.gov/MMTD-CHLHP

On Aug 2, 2018, at 8:15 AM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

Hendrik and John
Is there some discoloration or opacity of the dorsal surfaces of the flukes as well?
S

From: Nollens, Hendrik [mailto
Sent: Thursday, August 2, 2018 8:03 AM
To: John Durban - NOAA Federal; Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Raverty, Stephen AGRI:EX; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: RE: [EXTERNAL] Aerial images J50

I'll let other vets weight in, but the white patch is likely a yeast plaque. *Candida* spp or similar. Yeast overgrowth of the upper respiratory tract may explain the bad breath that has been noted, although the bad breath can be a side effect from inappetence as well. If a yeast plaque is present around the blowhole, the yeast has likely also invaded the upper respiratory tract (nares, paranasal diverticula) and probably the lower respiratory tract (bronchi, lungs). We don't typically think of a yeast as a primary cause of illness, but it is a clear sign of how compromised J50 is. She probably also has pneumonia and is in my opinion not likely survive without help.

From: John Durban - NOAA Federal [mailto:
Sent: Thursday, August 02, 2018 8:01 AM
To: Nollens, Hendrik; Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Stephen AGRI:EX Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: RE: [EXTERNAL] Aerial images J50

It is real.

On August 2, 2018 7:34:33 AM "Nollens, Hendrik" wrote:

> Hi John,
>
> Thank you for sharing. This confirms what Ken said in his last email; not good. Is the white patch behind her blowhole an artifact or is it real?

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--HN.

From: John Durban - NOAA Federal [mailto:
Sent: Thursday, August 02, 2018 7:14 AM
To: Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Nollens, Hendrik; Stephen AGRI:EX Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: [EXTERNAL] Aerial images J50

Dear Colleagues,

Images from SR3 and NOAA, not for distribution
Note that I have copied Michael, Lessana and Frances - additional vets that we have been engaging in discussions of SRKW condition

Holly and I managed to obtain some aerial images of some J and L pod whales yesterday, including the J16s. It was very challenging wind and glare conditions, but nonetheless we wanted to share some first aerial images of J50's body condition. Attached here is an image that compares her vertical photograph with one taken in May 2017, when she was at her previously worst measure of body condition (see email below for a plot and description of body condition measures).

As you can see, the aerial comparison is concerning. In addition to a clear "peanut head", J50 has lost condition along the body axis (note particularly around the dorsal fin). I would also note that she was not in robust condition compared to others in her cohort in 2017, so the baseline image here isn't good condition.

We have been a bit rushed since getting in late last night so my apologies we didn't find our best shot from 2017 for comparison, but I think the difference is clear. We aim to get clearer images of her current condition, and other SRKWs, in the next few days and will provide updated image comparisons and quantitative measurements. When we get some time (likely this afternoon) Holly will update the plot below with condition measures for all the J16s.

We hope to be on the call today, but it depends on what we find on there boat.

Best Wishes, John

<image001.jpg>
- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
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Begin forwarded message:

From: John Durban - NOAA Federal <[redacted]>
Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition
Date: July 25, 2018 at 10:15:31 AM PDT
To: Joe Gaydos <[redacted]>
Cc: brad hanson <[redacted]>, Mike Ford <[redacted]>, Candi Emmons <[redacted]>, Lynne Barre <[redacted]>, Ken Balcomb <[redacted]>, Hendrik Nollens <[redacted]>, "Stephen AGRI:EX Raverty" <stephen.raverty@gov.bc.ca>, Linda Rhodes <[redacted]>, Sheila Thornton <Sheila.Thornton@dfo-mpo.gc.ca>, Paul Cottrell <Paul.Cottrell@dfo-mpo.gc.ca>, Holly Fearnbach <[redacted]>, Lance Barrett-Lennard <[redacted]>, Lisa Ballance <[redacted]>

Please note I am copying Holly and Lance here - my collaborators on body condition measures from recent UAS-based aerial photogrammetry.

Attached is a plot of our Eye Patch Ratio (EPR; Fearnbach et al. unpublished data) for each of the members of the J16 matriline over repeated photogrammetry measurements from September 2015, May 2016, September 2016, May 2017 and September 2017. Our ongoing data analyses indicate this EPR measure is our most sensitive measure of body condition (basically fatness behind the head), which gives us the greatest power (lowest CV in repeat measurements) to detect differences over time. Vertical error bars are SD of repeat measurements in each sampling period. Horizontal lines link the same individual over time.

The BLACK line is J50. You will see that she was in significantly poorer condition in each of our last two sampling periods in 2017.

Note that the very low measure in September 2017 was J52, another calf of the same cohort, that died within weeks of our sampling, We hope we don't see J50 measuring to be this emaciated when we begin sampling in early September, and hope she is still around then.

Please note, these data are unpublished, but are provided to facilitate our discussion tomorrow. Please do not use or distribute without permission.

Thanks, John

<image002.jpg>
- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
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s.21(1)(a)
s.21(1)(b)

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Mbarushimana, Jenny

From: Jones, Lisa Ann
Sent: August-05-18 12:14 PM
To: Jaremek, Daniel
Cc: Brekke, Heather; Shaikh, Sharlene; Hagerman, Kendra
Subject: RE: External Review of Draft Recovery Strategy
Attachments: Attach 1B - [redacted]doc

Hi Daniel,

Thought I would just update you on the status of the response letters as we had discussed.

The following 4 groups received emails from SAR Pacific Region on Friday August 3:

1) [redacted]
2)
3)
4)

As was requested any response to a government was held back - so we are awaiting input from MCU as to how the response to [redacted] will be handled (see attached for the response letter that SAR Pacific Region has developed). Further, for the two letters we received that had a cc [redacted] we have not included a cc to the [redacted] given he has yet to receive a response letter from MCU.

For these bottom 4 letters that had been addressed to the Minister, please let us know if you will be sending a follow-up thank-you email to our letters.

I note that the response letter to [redacted] remains under development.

Cheers
Lisa

From: Jones, Lisa Ann
Sent: August-03-18 1:51 PM
To: Jaremek, Daniel
Cc: Fershau, Jonathan; Brekke, Heather; Shaikh, Sharlene (Sharlene.Shaikh@dfo-mpo.gc.ca); Hagerman, Kendra
Subject: RE: External Review of Draft Recovery Strategy

Hi Daniel,

We have just received approval from RD EMB to send the response letters out.

We are going ahead to send these out today given the importance to provide timely replies but will hold back on sending the email with the attached response letter to the [redacted] until we hear from you (guessing this will be Tuesday now).

Please let me know if you need any further information and if you require any input to draft any follow-up emails MCU may consider sending to these groups.

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Have a good long weekend and will be in touch Tuesday (** [redacted] back Wednesday so please email Sharlene and Heather cc'd above)

Cheers
Lisa

From: Jones, Lisa Ann
Sent: August-03-18 11:46 AM
To: Jaremek, Daniel
Cc: Fershau, Jonathan; Brekke, Heather
Subject: RE: External Review of Draft Recovery Strategy

Hi Daniel,

Thank you for calling.

Here is my summary:

As I understand it, overall, and tbc…

- MCU will not be providing any further correspondence to those groups that submitted letters to the Minister, except for the letter from [redacted] for which MCU may provide an acknowledgement email that refers the response to come from Pacific Region – tbc today by MCU
- [redacted]

1) [redacted]

2) Recommend MCU close the docket, with note that Pacific Region will draft response for the following (If needed, we can send a copy of Pac response to MCU to add to the docket):

3) [redacted]

4) [redacted]

5) [redacted]

6) [redacted]

Please confirm as soon as possible so that we do not delay responses any further.

Cheers

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Lisa

From: Jaremek, Daniel
Sent: August-03-18 8:39 AM
To: Jones, Lisa Ann
Cc: pac.prmc / pac.urpcm (DFO/MPO)
Subject: RE: External Review of Draft Recovery Strategy

Hi Lisa Ann,

I'm just running into a quick meeting. I'll call you in a bit to discuss.

I have attached the incomings to the letters you described for now. Note that the [redacted] letters we treated as a generic request to meet and not as input into the consultation, so you may have received something else from them, outside of the Ministerial Correspondence Unit Process.

- West Coast Aquatic [redacted]
- Sport Fishing Advisory Board
- District of Ucluelet [redacted]
- BC Chamber of Commerce
- Port Renfrew Chamber of Commerce
- [redacted]

Talk soon,

Daniel

From: Jones, Lisa Ann
Sent: August-03-18 11:31 AM
To: Jaremek, Daniel
Cc: pac.prmc / pac.urpcm (DFO/MPO)
Subject: RE: External Review of Draft Recovery Strategy
Importance: High

Hi Daniel,

Just following up on this.

We at SAR Pacific Region have been drafting all the responses needed to letters received regarding the Amended Recovery Strategy for Resident Killer Whales, including those that were addressed to the Minister as per direction that these letters were being referred to the SAR Pacific Region for response. However we have only received notification of one letter being referred to the region (from West Coast Aquatic).

1. [redacted]
   - West Coast Aquatic [redacted]
   - Sport Fishing Advisory Board
   - District of Ucluelet [redacted]
   - BC Chamber of Commerce
   - Port Renfrew Chamber of Commerce
   - [redacted]

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FYI: We have drafted response letters to these groups and [redacted] and are awaiting regional approval for sending – they are expected to be sent out early next week.

2. [redacted]

Cheers
Lisa

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: July-27-18 9:23 AM
To: Jones, Lisa Ann
Subject: FW: External Review of Draft Recovery Strategy

Hi Lisa Ann,

Here is the response from Ottawa. I would suggest that Daniel Jaremek would be your contact for futher questions.

Thanks,

Heather

From: Jaremek, Daniel
Sent: July-27-18 9:22 AM
To: pac.prmc / pac.urpcm (DFO/MPO) <XPAC.PRMCU@dfo-mpo.gc.ca>
Subject: RE: External Review of Draft Recovery Strategy

Yes.

[redacted]

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: July-27-18 12:21 PM
To: Jaremek, Daniel
Subject: FW: External Review of Draft Recovery Strategy
Importance: High

Hi Daniel,

I assume that Candace emailed about this earlier in the week. Can I give the folks in PAC SARA your name to contact to clarify the process since PRMCU is out of this loop.

Heather

From: Jones, Lisa Ann
Sent: July-27-18 9:13 AM
To: pac.prmc / pac.urpcm (DFO/MPO) <XPAC.PRMCU@dfo-mpo.gc.ca>
Cc: Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>
Subject: RE: External Review of Draft Recovery Strategy

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Hi Candace,

Have you heard back on this issue? If there has been no correspondence sent in response to letters addressed to the ministers then we will need to address this in our letters. We would like to have confirmation on this process – is this something we can call to ask about for clarity?

Just want to be sure that we are covering our bases ☺

Cheers
Lisa

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: July-25-18 1:45 PM
To: Jones, Lisa Ann
Subject: FW: External Review of Draft Recovery Strategy

Hi Lisa.
I don't think we can assume that the writer didn't received a "Thanks...I've forwarded" response. I am checking in with Ottawa to confirm, but we went back and forth with them on a referral letter, so I'm pretty sure they're sending one.

I am assuming that the mechanism they are using to forward the letter to you is what is different from what we expected—that they're sending the email as below rather than just copying you on their response.

I'll let you know when I hear back.

Candace

From: Jones, Lisa Ann
Sent: Wednesday, July 25, 2018 1:35 PM
To: pac.prmc / pac.urpcm (DFO/MPO)
Cc: Shaikh, Sharlene
Subject: FW: External Review of Draft Recovery Strategy

Hi Candace,

So we just got this into our SARA inbox. This seems to indicate that they (Minister office) have not sent out any notification to the respondent to indicate that they have referred this letter on to PAC SARA and are not planning on doing so.

Can you clarify.....would your group be sending this type of notification? Or do we (PAC SARA) need to send a 'thank you for your letter, a more fulsome reply to your letter is pending' given we won't have letters out until next week.

Cheers
Lisa

From: PAC-SARA / LEP-PAC (DFO/MPO)
Sent: July-25-18 12:49 PM
To: Shaikh, Sharlene
Cc: Jones, Lisa Ann; Brekke, Heather
Subject: FW: External Review of Draft Recovery Strategy

Information only, as the need for a Pacific response is noted in the tracking sheet.

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Response now actioned to Pacific. Note that it does not appear that NHQ is sending a "Thank You...detailed response forthcoming from Pacific Region" letter to senders.

Jonathan

From: Minister / Ministre (DFO/MPO)
Sent: July-25-18 11:05 AM
To: PAC-SARA / LEP-PAC (DFO/MPO)
Subject: FW: External Review of Draft Recovery Strategy

The following correspondence was received at min@dfo-mpo.gc.ca, the departmental email address for the Minister of Fisheries, Oceans and the Canadian Coast Guard. It is being sent to you for your action, as appropriate. No further action on this correspondence will be taken by the Ministerial Correspondence Control Unit.

Thank you.

Ministerial Correspondence Unit
Fisheries and Oceans Canada / Government of Canada
MCCU Analyst Group: XNCR-GrpCA/AC@dfo-mpo.gc.ca

La correspondance suivante a été reçue à min@dfo-mpo.gc.ca, l'adresse électronique du ministre des Pêches, des Océans et de la Garde côtière canadienne. Elle vous est transmise afin que vous preniez les mesures appropriées. Aucune autre mesure ne sera prise par l'Unité du contrôle de la correspondance ministérielle à l'égard de cette correspondance.

Merci.

Unité de la correspondance ministérielle
Pêches et Océans Canada / Gouvernement du Canada
Groupe analyste d'UCCM: XNCR-GrpCA/AC@dfo-mpo.gc.ca

From: [redacted]
Sent: July-11-18 7:48 PM
To: ec.ministre-minister.ec@canada.ca; Minister / Ministre (DFO/MPO)
Cc: Brekke, Heather; McMillan, Christie; PAC-SARA / LEP-PAC (DFO/MPO)
Subject: External Review of Draft Recovery Strategy

Hello Ministers McKenna and LeBlanc. Thank you for your consideration of the attached letter that has been sent on behalf of:

- West Coast Aquatic Governance Board
- West Coast Fishing Guides Association
- Alberni Sport Fish Advisory Committee
- Area G Trollers Association
- BC Commercial Fishing Caucus

We look forward to your response.

Sincerely,

s.19(1)

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West Coast Aquatic
Cell
www.westcoastaquatic.ca
www.roundtables.westcoastaquatic.ca
https://marineguide.ca

Pages 1291 to / à 1292

are not relevant

sont non pertinentes

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Dozie, Juachi

From: Davies, Leri
Sent: August-05-18 9:36 AM
To: Cottrell, Paul
Subject: Fw: Media request from CBC News Network - struggling J50 killer orca and dead calf

Hey Paul. Another request for info. Best. Leri

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: [redacted]
Sent: Sunday, August 5, 2018 7:26 AM
To: NCR Media RCN (DFO/MPO); RHQ - Media.PAC
Subject: Media request from CBC News Network - struggling J50 killer orca and dead calf

Good morning,

My name is [redacted] with CBC News Network.

Hope you're well.

Wondering if you might be able to provide an update on the plan to save the endangered J-pod orcas that have been getting a lot of attention.

I understand the U.S. National Oceanic and Atmospheric Administration is working with Fisheries and Oceans Canada on a plan to save it.

Background article:
https://www.cbc.ca/news/canada/british-columbia/u-s-and-canadian-agencies-partner-to-aid-struggling-orca-in-b-c-coastal-waters-1.4774106

What is being done now?
Is there a timeline in place to save them?
What are some of the challenges involved in this type of situation?

We are hoping to report on this today if possible.

Wondering if there is someone available for a chat by phone or for a live TV interview.
We are on air all day today (Sunday August 5).

Thank you for your time.
Hope to hear from you.

[redacted]

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s.19(1)

CBC News Network

[redacted]

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Dozie, Juachi

From: Davies, Leri
Sent: August-05-18 10:27 AM
To: Cottrell, Paul
Subject: Fw: Media request from CBC News Network - struggling J50 killer orca and dead calf

Hi Paul. Did you respond directly to the reporter or do you need me to send a statement from you? Best and thanks. Leri

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: [redacted]
Sent: Sunday, August 5, 2018 9:40 AM
To: Davies, Leri
Cc: NCR Media RCN (DFO/MPO); RHQ - Media.PAC
Subject: Re: Media request from CBC News Network - struggling J50 killer orca and dead calf

Hi Leri,

Thanks for getting back to us.

We are on air all day today until 1700 ET.

We are also on air tomorrow Monday August 6 from 0600 to 1700 ET.

We would also take a written statement if an interview is not possible.

Thanks for your help,

[redacted]

On Sun, Aug 5, 2018 at 12:35 PM, Davies, Leri <Leri.Davies@dfo-mpo.gc.ca> wrote:
Good morning. I will see if anyone is available for you. What is your deadline. Best Leri

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: [redacted]
Sent: Sunday, August 5, 2018 7:26 AM
To: NCR Media RCN (DFO/MPO); RHQ - Media.PAC
Subject: Media request from CBC News Network - struggling J50 killer orca and dead calf

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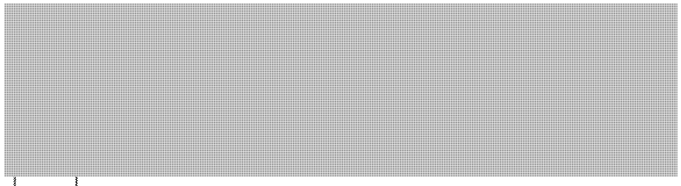
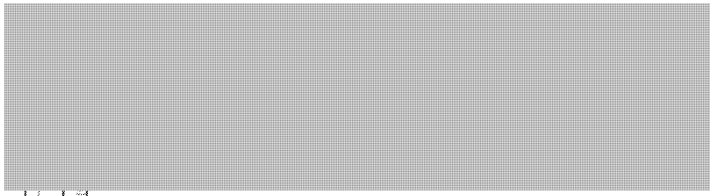
CBC News Network



CBC News Network



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Dozie, Juachi

From: John Ford [redacted]
Sent: August-05-18 10:04 AM
To: Cottrell, Paul
Subject: Re: NOAA Proposal

Hey Paul,

Give me a shout on my cell whenever you'd like to chat about this proposal.

Also, thought you'd be interested in this editorial.. [redacted]

https://www.comoxvalleyrecord.com/opinion/editorial-whale-relocation-a-success-story-to-be-celebrated/

John

On Aug 4, 2018, at 2:01 PM, Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca> wrote:

Hi Guys,
Could really use your expert opinion on this proposal. NOAA wants DFO's approval for work in Canadian waters. [redacted] Your thoughts appreciated.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.
<Proposal For Emergency Response To Provide Oral Medical And Supplimental Nutrition To J50.pdf>

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s.19(1)

Dozie, Juachi

From: Ruth Howell - NOAA Federal <[redacted]>
Sent: August-05-18 1:38 PM
To: Kristin Wilkinson - NOAA Federal
Cc: Katy Foster; Brad Hanson (NOAA Federal); Holly Fearnbach; [redacted] John Durban - NOAA Federal; Marty Haulena; Deborah Giles; jeff foster; Joseph Karl Gaydos; [redacted] Jim McBain; Lynne Barre - NOAA Federal; Teri Rowles; Deborah Fauquier; Barry Thom - NOAA Federal; Mike Ford; Mark Strom - NOAA Federal; Vicky Krikelas; Kevin Werner - NOAA Federal; Director Marine Mammal; Sarah Mesnick; Scott Rumsey - NOAA Federal; Cottrell, Paul; Forbes Darby - NOAA Federal; Chris Yates - NOAA Federal; Thornton, Sheila; Michael Milstein - NOAA Federal; Jim Milbury - NOAA Federal; Becker, Penny A (DFW)
Subject: Re: Daily Debrief for Saturday, August 4th

Hello all,

As I previewed on the conference call last night, I am sharing with you the draft NOAA communications plan. In it you will find the daily meetings we are standing up to share information and ensure consistency in messaging. We will start implementing this after the debrief this evening.

The key communications coordination calls will happen every morning at 8:30am PDT, with a daily press call to follow at 10am. Response partner organizations are welcome to send a representative to that call; just send me their name and contact information.

Other elements of the plan:
1) NOAA Comms team members
2) Response Partner Organization Communications contacts (feel free to replace/add for your organization - I hope to organize a call for partners Monday or Tuesday)
3) Press points of contact
4) Subject Matter Experts (who may be called upon for press interviews - if you are listed please add your contact information)
5) Planned & Future Products (note: website and constituent inquiry form are underway)

Please let me know if you have any suggestions or edits to help us better serve your efforts on the water. As mentioned yesterday, our goal here is to absorb as much of the public interest in this as we can, and the plan is designed with that in mind.
Note: if you have trouble accessing this Google file, let me know and I'll send you a Word version.

Communications Plan for Emergency Response to J50

Thanks all, we're all sending you the best of luck on the water today.

Ruth

On Sat, Aug 4, 2018 at 10:13 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:
Good Evening Everyone -

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Thank you to those of you who were able to join us tonight for the Saturday debrief call.

While J50 was not sighted today we can confirm that J pod is headed inland and was last sighted eastbound near Jordan River and Sooke around 7pm. They will likely come into the San Juan area tonight so we are very hopeful we will accomplish on Sunday the below goals;

1. Fecal sample collection from J50 - Deborah Giles, University of Washington
2. Breath sample collection from J50 - Hanson, NWFSC
3. Sample collection of skin if needed, areas of discoloration have been noted - Giles or Hanson
4. Veterinary medical assessment on J50 - Haulena, Vancouver Aquarium (Dr. Haulena will be on Brad Hanson's vessel)
5. Additional imagery and video of J50 by UAS - Durban and Fernbach, SWFSC and SR3 Images of the flukes and overall skin appearance is of interest to the veterinarians as well as respiration rate.
6. After the veterinary health assessment is complete a veterinarian call will be hosted by NOAA Fisheries - timing to be determined. This will be a small group of veterinarians to discuss the best treatment for J50's condition.

The NOAA Communications and External Affairs team provided a very valuable overview of their plans to communicate with the public and with the media. I'll let Ruth and Forbes outline their plan in a separate email. Any media inquires can be directed to the Communications Team, [redacted] or via cell at [redacted] Michael did reach out to the news directors in the Seattle area requesting they be mindful of the on-water activities so we can make the most of our time with J50 and the other SRKW's.

Many of you have asked for permission to view the Google Drive, here is a direct link and I will also follow up with an invite. We have all agreed that images will not be shared outside of the group. https://drive.google.com/drive/folders/1Gg5Whty6QvPFPYJEUps2PtvTXgRDT5eq?usp=sharing

We will plan to talk again tomorrow night, Sunday, August 5th at 9pm. Please call into 503-326-7672.

A huge thank you to everyone involved!

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

--
Ruth Howell
Communications Program Manager
Northwest Fisheries Science Center
[redacted]
206.302.2474 (w)
[redacted] (c)

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s.16(2)

s.19(1)

Dozie, Juachi

From: Michael Milstein - NOAA Federal <[redacted]>
Sent: August-05-18 7:51 PM
To: Cottrell, Paul
Cc: Lynne Barre - NOAA Federal; Bate, Dan; Girouard, Louise; Sloan, Lara; Davis, Neil; Kennedy, Eddy; MacConnachie, Sean; Thornton, Sheila; Thomson, Andrew; Ruth Howell - NOAA Federal; Kristin Wilkinson - NOAA Affiliate; Brad Hanson - NOAA Federal
Subject: Re: Emergency response to J50

Resending with Brad's correct email.

On Sun, Aug 5, 2018 at 7:50 PM, Michael Milstein - NOAA Federal <[redacted]> wrote:
Hi Paul,

I responded last night, but yes, we are ready for the call with you at 11 am on Tuesday and will be there to consult, coordinate and answer questions. Please let me know if there is anything else I can do in the meantime.

Look forward to talking with you.

Michael

On Sun, Aug 5, 2018 at 7:44 PM, Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca> wrote:
Hi Michael, Lynne and Brad,
I have not heard back about the call on Tuesday and your availability. We (DFO) have several questions about the methodology and approach of the emergency proposal details released by NOAA. Please confirm if you are able to call in on Tuesday morning at 11.
Call-in: 1-8777-413-4781
Conference ID: [redacted]

Thanks so much,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

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From: Cottrell, Paul
Sent: Friday, August 03, 2018 7:08 AM
To: Michael Milstein - NOAA Federal
Cc: Lynne Barre - NOAA Federal; Bate, Dan; Girouard, Louise; Sloan, Lara; Davis, Neil; Kennedy, Eddy; MacConnachie, Sean; Thornton, Sheila; Thomson, Andrew
Subject: Re: Emergency response to J50

Hi Michael,
Yes, it would be useful to coordinate efforts and press releases on potential efforts to intervene with J50 ([redacted]. As you guys know this is a very complicated issue with many potential outcomes (good and bad) if intervention is decided. Appropriated licencing and contingencies will have to be considered. I recommend a NOAA/DFO call with MM science, MM management and communications staff to discuss (This Tuesday would be good) to ensure a coordinated response. The conference calls with experts discussing current status, condition, potential pathogens and actions to collect additional information to assess J50 have been very useful. The broad range of potential actions which could be considered needs to be further discussed. Let me know when you guys area available for a call on Tuesday. For now let's consider Tuesday 11 am as a straw dog time for a call (Monday is a holiday in BC).
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Michael Milstein - NOAA Federal
Sent: Friday, August 3, 2018 12:34 AM
To: Sloan, Lara; Cottrell, Paul
Cc: Lynne Barre - NOAA Federal
Subject: Emergency response to J50

Hi Lara and Paul,

You are probably aware of this by now but we are considering whether it makes sense to attempt some sort of action to help J50.

See The Seattle Times article tonight.

This story came out faster than we expected, so sorry for the late notice.

We would like to stay in close coordination with you at DRO on this as it develops, as the whales have been moving back and forth across the border. This will be especially valuable in terms of communications to the press. Are you developing talking points or anything similar on this issue?

Please let me know if there is anything I can do to help or assist you.

Best
Michael

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s.19(1)

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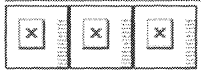
Michael Milstein
Public Affairs Officer
NOAA Fisheries
West Coast Region, Northwest Fisheries Science Center, Southwest Fisheries Science Center
Office: 503-231-6268
Cell: [redacted]
[redacted]

Find us online
www.nmfs.noaa.gov



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Michael Milstein
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[redacted]

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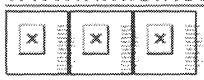

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Michael Milstein
Public Affairs Officer
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West Coast Region, Northwest Fisheries Science Center, Southwest Fisheries Science Center
Office: 503-231-6268
Cell: [redacted]
[redacted]

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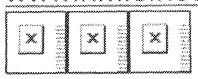

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Dozie, Juachi

From: Lowe, Carmel
Sent: August-05-18 10:25 PM
To: Cottrell, Paul
Subject: Re: Emergency response to J50

Thanks Paul.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Sunday, August 5, 2018 20:29
To: Lowe, Carmel
Subject: Fw: Emergency response to J50

Hi Carmel,
Fyi.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Michael Milstein - NOAA Federal [redacted]
Sent: Sunday, August 5, 2018 7:50 PM
To: Cottrell, Paul
Cc: Lynne Barre - NOAA Federal; Bate, Dan; Girouard, Louise; Sloan, Lara; Davis, Neil; Kennedy, Eddy; MacConnachie, Sean; Thornton, Sheila; Thomson, Andrew; brad.hansen@noaa.gov; Ruth Howell - NOAA Federal; Kristin Wilkinson - NOAA Affiliate
Subject: Re: Emergency response to J50

Hi Paul,

I responded last night, but yes, we are ready for the call with you at 11 am on Tuesday and will be there to consult, coordinate and answer questions. Please let me know if there is anything else I can do in the meantime.

Look forward to talking with you.

Michael

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Call-in: 1-8777-413-4781
Conference ID: [redacted]

Thanks so much,
Paul

Paul Cottrell

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Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

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(604) 666-9965

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Subject: Re: Emergency response to J50

Hi Michael,
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Please let me know if there is anything I can do to help or assist you.

Best
Michael

--
Michael Milstein
Public Affairs Officer
NOAA Fisheries
West Coast Region, *Northwest Fisheries Science Center*, *Southwest Fisheries Science Center*
Office: 503-231-6268
Cell: [redacted]

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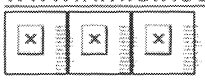

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Michael Milstein
Public Affairs Officer
NOAA Fisheries
West Coast Region, *Northwest Fisheries Science Center*, *Southwest Fisheries Science Center*
Office: 503-231-6268
Cell: [redacted]

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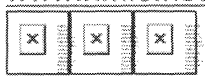

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Dozie, Juachi

From: Thornton, Sheila
Sent: August-05-18 7:19 AM
To: Lowe, Carmel; MacConnachie, Sean; Kennedy, Eddy
Cc: Cottrell, Paul
Subject: J50

Over the last few days, NOAA has organized a consultation team to discuss the condition of J50 and a potential intervention (on the Canadian side, myself, Paul Cottrell, Stephen Raverty, and the OceanWise vet Marty Haulena are all invited participants).

They are on the water today to accomplish the following goals:

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2. Breath sample collection from J50 - Hanson, NWFSC
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A number of treatment options have been discussed and range from supplemental feeding in the wild via a PVC sluice (Lummi Nation are currently catching and containing large Chinook); oral medication inside a fish, or injection with a dart; penning her, hydrating and medicating, etc. They have a full media network and have contacted all 10 stations in Seattle to coordinate news releases.

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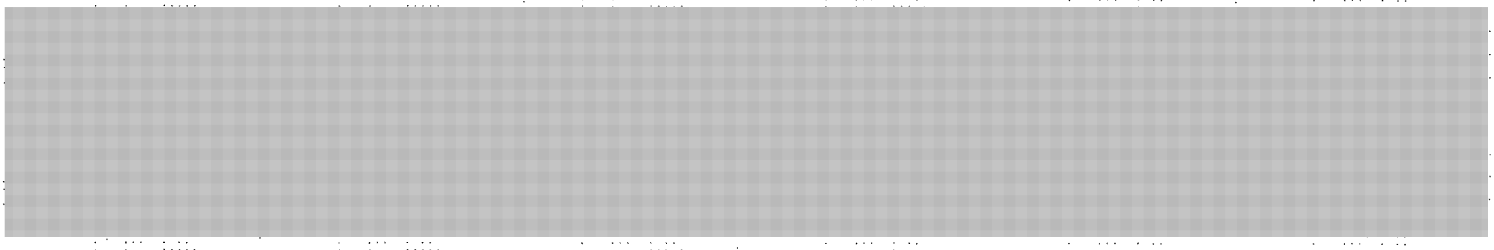

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We have another debrief call at 9 pm tonight; I will update as the information comes in.

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-05-18 8:16 PM
To: Thomson, Andrew
Subject: Re: Emergency response to J50

Thanks Andy,
There is an update call tonight at 9 hosted by NOAA. Jpod has not been seen the past 2 days so no activities have occurred. I'll keep you posted.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Thomson, Andrew
Sent: Sunday, August 5, 2018 8:00 PM
To: Cottrell, Paul
Subject: Re: Emergency response to J50

Paul

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Cottrell, Paul
Sent: Sunday, August 5, 2018 7:44 PM
To: Michael Milstein - NOAA Federal
Cc: Lynne Barre - NOAA Federal; Bate, Dan; Girouard, Louise; Sloan, Lara; Davis, Neil; Kennedy, Eddy; MacConnachie, Sean; Thornton, Sheila; Thomson, Andrew; brad.hansen@noaa.gov
Subject: RE: Emergency response to J50

Hi Michael, Lynne and Brad,

s.16(2) s.19(1)

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I have not heard back about the call on Tuesday and your availability. We (DFO) have several questions about the methodology and approach of the emergency proposal details released by NOAA. Please confirm if you are able to call in on Tuesday morning at 11.
Call-in: 1-8777-413-4781
Conference ID:

Thanks so much,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Cottrell, Paul
Sent: Friday, August 03, 2018 7:08 AM
To: Michael Milstein - NOAA Federal
Cc: Lynne Barre - NOAA Federal; Bate, Dan; Girouard, Louise; Sloan, Lara; Davis, Neil; Kennedy, Eddy; MacConnachie, Sean; Thornton, Sheila; Thomson, Andrew
Subject: Re: Emergency response to J50

Hi Michael,
Yes, it would be useful to coordinate efforts and press releases on potential efforts to intervene with J50 (. As you guys know this is a very complicated issue with many potential outcomes (good and bad) if intervention is decided. Appropriated licencing and contingencies will have to be considered. I recommend a NOAA/DFO call with MM science, MM management and communications staff to discuss (This Tuesday would be good) to ensure a coordinated response. The conference calls with experts discussing current status, condition, potential pathogens and actions to collect additional information to assess J50 have been very useful. The broad range of potential actions which could be considered needs to be further discussed. Let me know when you guys area available for a call on Tuesday. For now let's consider Tuesday 11 am as a straw dog time for a call (Monday is a holiday in BC).
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Michael Milstein - NOAA Federal
Sent: Friday, August 3, 2018 12:34 AM
To: Sloan, Lara; Cottrell, Paul

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Cc: Lynne Barre - NOAA Federal
Subject: Emergency response to J50

Hi Lara and Paul,

You are probably aware of this by now but we are considering whether it makes sense to attempt some sort of action to help J50.

See The Seattle Times article tonight.

This story came out faster than we expected, so sorry for the late notice.

We would like to stay in close coordination with you at DRO on this as it develops, as the whales have been moving back and forth across the border. This will be especially valuable in terms of communications to the press. Are you developing talking points or anything similar on this issue?

Please let me know if there is anything I can do to help or assist you.

Best
Michael

--
Michael Milstein
Public Affairs Officer
NOAA Fisheries
West Coast Region, Northwest Fisheries Science Center, Southwest Fisheries Science Center
Office: 503-231-6268
Cell: [redacted]

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www.nmfs.noaa.gov

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-05-18 4:09 PM
To: Thornton, Sheila
Subject: Re: Emergency response to J50

Thanks Sheila,
Will do, I'm on the water Tuesday but will ensure I'm in cell range.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Thornton, Sheila
Sent: Sunday, August 5, 2018 3:22 PM
To: Cottrell, Paul
Subject: FW: Emergency response to J50

Paul - I will be on the road tomorrow to Telegraph Cove. Could you please make sure Carmel is cc'd and included in the invitation for the Tuesday call at 11:00 am?

I will be available for the call on Tuesday, but on the road tomorrow and in and out of cell coverage.

We're on the same page with the issue.

Cheers,

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
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Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Lowe, Carmel
Sent: August 5, 2018 8:03 AM
To: Thornton, Sheila
Cc: Dickie, Catherine
Subject: Re: Emergency response to J50

OK I will join - pls send me details for call-in.

Carmel

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s.19(1)

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Thornton, Sheila
Sent: Sunday, August 5, 2018 07:29
To: Lowe, Carmel
Subject: FW: Emergency response to J50

Carmel - as Eddy and Sean are away, it may be best if you could participate on this call.

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
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Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Michael Milstein - NOAA Federal [redacted]
Sent: August 4, 2018 8:58 PM
To: Cottrell, Paul
Cc: Lynne Barre - NOAA Federal; Bate, Dan; Girouard, Louise; Sloan, Lara; Davis, Neil; Kennedy, Eddy; MacConnachie, Sean; Thornton, Sheila; Thomson, Andrew; Ruth Howell - NOAA Federal
Subject: Re: Emergency response to J50

Thank you Paul, and my apologies for my slow response.

Agree with you that coordination is essential. I have reserved a conference line for us at 11 a.m. Tuesday as you suggested. Of course things are moving and could change quickly, so if it turns out we do not need the call that is ok too.

I will follow up on Monday when we should know more.

I am adding Ruth Howell, who is our new communications manager for NOAA Fisheries on the West Coast.

Thank you for all your work.

Best
Michael

On Fri, Aug 3, 2018 at 7:08 AM, Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca> wrote:
Hi Michael,
Yes, it would be useful to coordinate efforts and press releases on potential efforts to intervene with J50 [redacted] As you guys know this is a very complicated issue with many potential outcomes (good and bad) if intervention is decided. Appropriated licencing and contingencies will have to be considered. I recommend a NOAA/DFO call with MM science, MM management and communications staff to discuss (This Tuesday would be good) to ensure a coordinated response. The conference calls with experts discussing current status, condition, potential pathogens and actions to collect additional information to assess J50 have been very useful. The broad range of potential actions which could be considered needs to be

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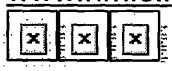

s.21(1)(a) s.21(1)(b)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-05-18 9:13 AM
To: Thornton, Sheila; Lowe, Carmel; MacConnachie, Sean; Kennedy, Eddy
Cc: Davis, Neil; Thomson, Andrew
Subject: RE: J50
Attachments: Proposal For Emergency Response To Provide Oral Medical And Supplimental Nutrition To J50.pdf

Thanks Sheila,

[redacted]

Best,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

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(604) 666-9965

From: Thornton, Sheila
Sent: Sunday, August 05, 2018 7:18 AM
To: Lowe, Carmel; MacConnachie, Sean; Kennedy, Eddy
Cc: Cottrell, Paul
Subject: J50

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Proposal For Emergency Response To Provide Oral Medical And Supplemental Nutrition To J50

Prepared by Jeff Foster [1], Katy Foster [1], Dr. Brad Hanson[3], Dr. Hendrik Nollens [2], Dr. Deborah Giles[4,5], Dr. John Durban[3], Dr. Holly Fearnbach[6], Dr. Joe Gaydos[7]

1-Whale Sanctuary Project, 2-SeaWorld, 3-NOAA, 4-UW Center For Conservation Biology, 5-Wild Orca, 6-SR3, 6-SeaDoc

Disclaimer: *This is a fluid situation and we need to pledge that the plan remains flexible and adaptable to all circumstances that arise, while keeping in mind the safety and health of all involved.*

OVERVIEW

1. Signalment
2. Medical History
3. Current Health Condition
4. Purpose Of Response
5. Phases Of Response
    a. Phase 1. Health Assessment
    b. Phase 2. Initial Feeding
    c. Phase 3. Administer Oral Medication
6. Timeframe
7. Possible Stopping Points
8. Response Partners
9. Response Personel
10. Documentation
11. Appendix A. (*J50 Proposed Health Assessment Of Recovered Blow And Fecal Samples*)

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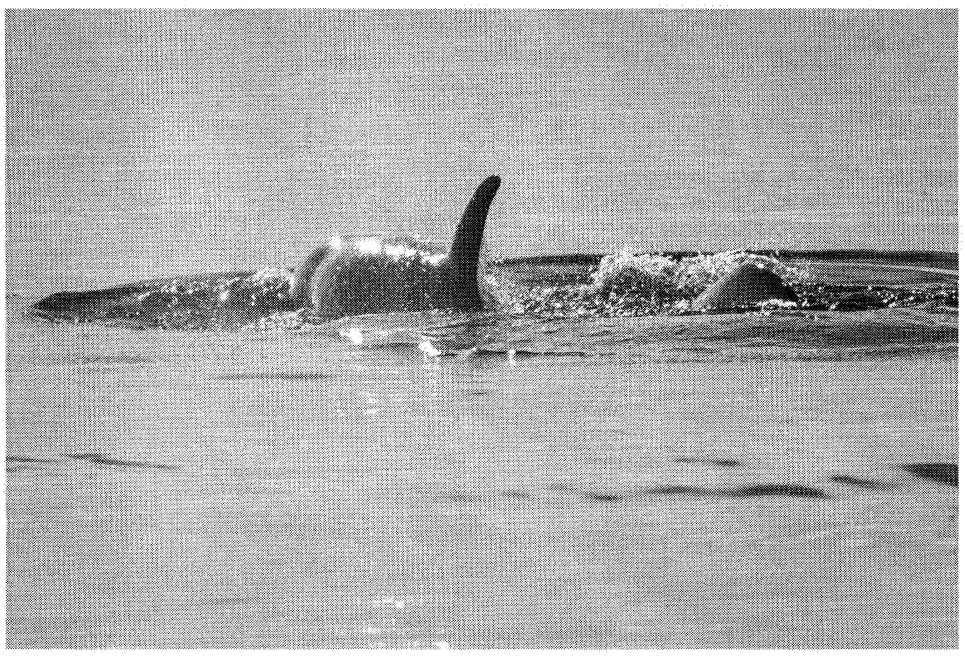

Fig.1 – "Peanut Head" J50, July 21st, 2018 Katy Foster/NOAA Fisheries

SIGNALMENT

J50 is a member of the SRKW JPod. She is the daughter of J16 and was most likely born to J16 during one of her last years of reproductive potential. J50 was first seen in the San Juan/Gulf Island archipelago on the 30th of December 2014 (*Center For Whale Research*), and was estimated by researchers to be 4-10 days old at that time. J16 has five prior calves, three of which survived.

J50 has always been considered to be a smaller than average animal for her age. Drone photogrammetry studies by Dr. John Durban, Dr. Holly Fearnbach, and Dr. Lance Barrett-Lennard (Vancouver Aquarium) have document J50's small size for her age since her first year of life. and her notably poorer body condition in 2017.

**J50 had numerous rake marks around her dorsal fin when born. Ken Balcomb has theorized that there could have been a dystocia due to other individuals pulling on her. This is strictly conjecture, but could suggest some early traumatic issue associated with parturition like traumatic diaphragmatic hernia.*

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MEDICAL HISTORY

Dr. John Durban, Dr. Holly Fearnbach, and Dr. Lance Barrett-Lennard (Vancouver Aquarium) documented J50s notably poorer body condition beginning in 2017. In January 2018, The Center For Whale Research observed further declining body condition as viewed from a boat, noting that J50 began displaying a "peanut-head". Historically, 11 of 13 southern residents that have displayed this loss of nuchal fat have gone on to die. Further aerial drone collected by Dr. Durban & Dr. Fearnbach on August 1st, 2018, show that J50 is in very poor body condition (fig.2), similar to the measured condition of her cousin J52 before he disappeared in 2017 (fig.3). Additionally these images have documented a white discoloration to the skin behind the head. Researchers from the Center Of Whale Research have also noted deterioration in her body condition in recent weeks.

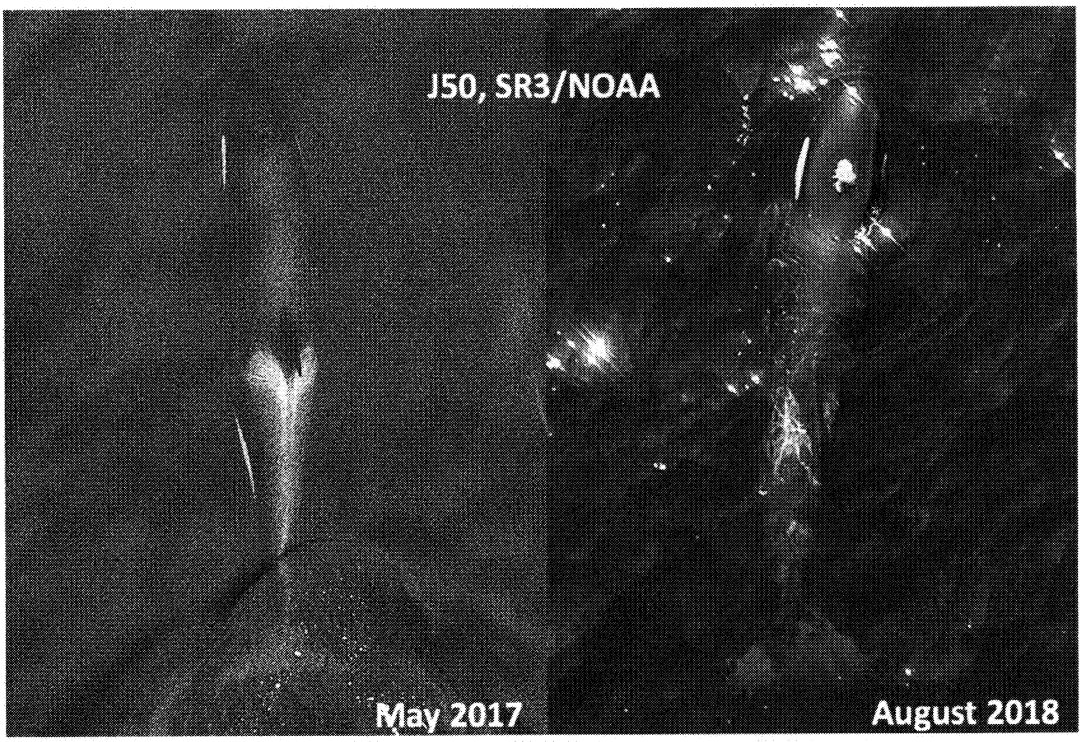

Fig. 2 *Holly Fearnbach/SR3 and John Durban/NOAA*

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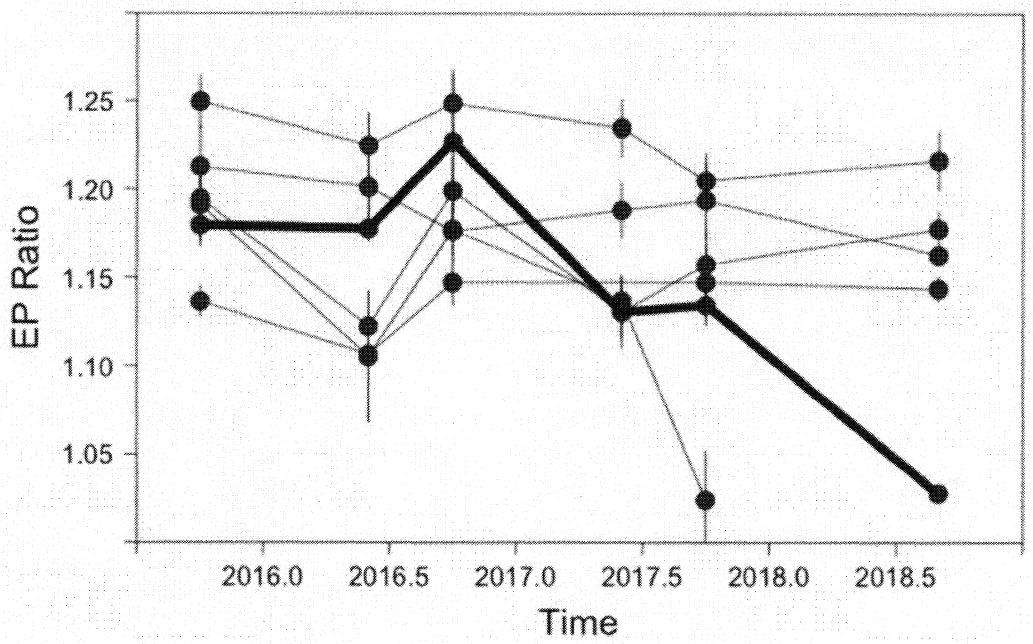

Fig.3: Eye Patch Ratio (EPR; Fearnbach et al. unpublished data) for each of the members of the J16 matriline over repeated photogrammetry measurements from September 2015 until 1 August 2018. Vertical error bars are SD of repeat measurements in each sampling period. Horizontal lines link the same individual over time. J50 is indicated by the black line. J50's EPR has declined to similar levels reached by her cousin (J52) shortly before his death in 2017.

**Historically, 48% of necropsied SRKWs have had evidence of pneumonia. In 24% of cases, pneumonia was considered the leading cause of death. (Raverty et al., in prep).*

In early July, Dr. Deborah Giles noted that J50 seemed to display foul smelling breath. J50s breath has been observed to smell normal during the month of July as well, and seems to vary with time.

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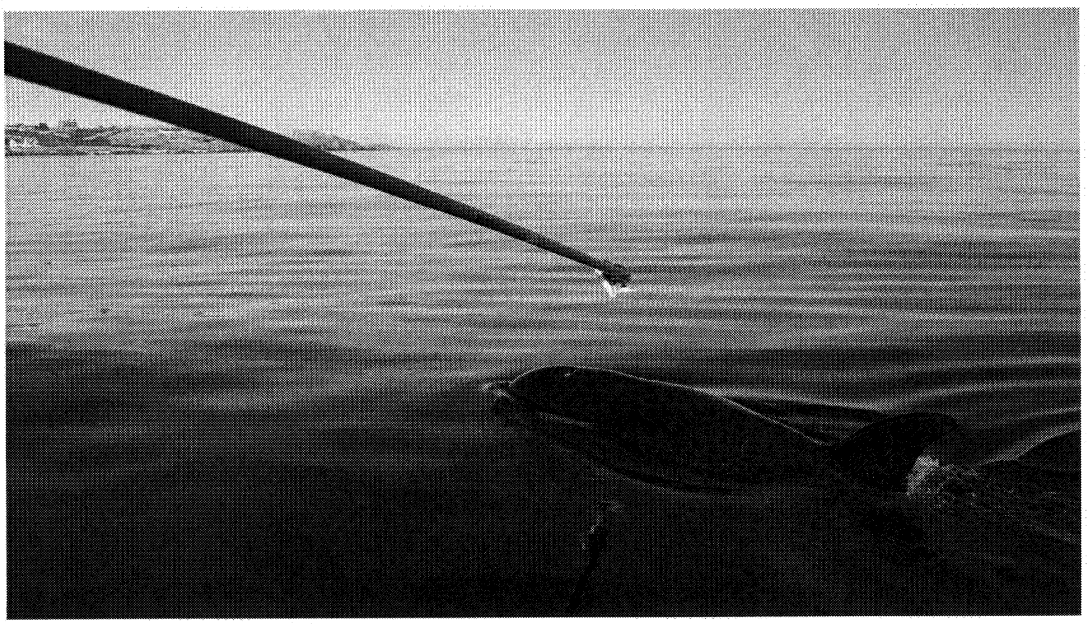

Fig.4 – J50 Respiratory Sample July 21st, 2018

Dr. Brad Hanson and a small team obtained a respiratory sample from J50 on July 21st, 2018. The sample was obtained using the protocols for blow and fecal samples listed in Appendix A. The sample yielded a small amount of DNA, of which 4 sequenced sets were obtained. One of these sequence sets was matched to the fungal genus *Exophiala* (Ascomycetes) (known to be an opportunistic pathogen in other species). Another (sub-optimal) sequence set matched to the fungal genus *Cladosporium* (not a well demonstrated pathogen). Due to the small size of this sample, it is necessary to obtain additional samples to better diagnose if J50 is dealing with pathogens that need to be treated.

CURRENT HEALTH CONDITION

- Total length 321cm
- Estimated to be ~20% underweight. Presumed to be dehydrated due to insufficient food volume intake
- Based on extrapolation from SeaWorld morphometric data, J50's current body mass is estimated to be around 508kg.
- White, irregularly shaped macular discoloration present immediately posterior to the blowhole. Differential diagnoses include scarring, yeast (*Candida spp*) or fungal overgrowth, infarction, other.
- Presumed to have pneumonia (primary or secondary)

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PURPOSE OF RESPONSE

The proposed plan is in response to the deteriorating condition of J50. The goals of this response are:

1. To develop a technique for delivering food fish to J50.
2. To attempt to orally administer antimicrobial medications to J50
3. To test the feasibility of nutrition and hydration supplementating J50 by supplementing up to 60 lbs of live Chinook salmon to J50 daily

This response will serve as a trial for intervening with nutritional supplementation and orally administered medications for compromised SRKW should similar situations arise in the future.

PHASES OF RESPONSE

Phase 1. Health Assessment

In order to understand the health of J50, health assessments are currently being conducted and will continue during this response effort, as well as for a period of time after the response effort as dictated by the outcome and expert opinion. All assessment will be conducted with consultation of NOAA.

Health assessment will include observations of body condition and behavior, from various marine vessels, drone observations, and from shore (when possible). Photos (high resolution) and video (1080p and greater resolution) will be collected from all platforms utilized, and images will be used for comparisons and ongoing assessment. Images collected by drone will be used to estimate body size and evaluate body condition.

Respiratory samples will be taken and analyzed for potential pathogens and other health indicators using cytology, culture and molecular methods. Respiratory samples will be obtained from a NOAA vessel (Hurricane 733). Additional vessels may be used during respiratory sampling as needed. Respiratory samples will be collected via petri dishes mounted on the end of a carbon fiber pole.

Respiratory samples will be processed using the sample processing protocols found in Appendix A.

Fecal samples will be collected whenever possible. Fecal samples will be collected both visually, and utilizing a trained scat detection dog onboard a research vessel. The scat dog can locate KW feces in the marine environment by situating the vessel perpendicular to the wind, 400m or more from the focal group. Fecal samples collected this way can yield anaylisis of nutrition, hormones, toxins, DNA, and stress hormones (depending on location of other working vessels).

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Small fecal samples will be collected in tubes and immediately placed in a cooler. Larger fecal samples will be collected on sterile gauze sealed in zip locks and placed immediately in cool storage.

Fecal samples will be processed using the sample processing protocols found in Appendix A.

Behavioral patterns will be monitored as often as possible throughout the response. Behavioral ethograms may be developed for this purpose with a dedicated observer collecting this data for future analysis.

Parameters that will be monitored and recorded include

1. Respiratory rate (# respirations/5 minutes)
2. Blow odor
3. Defecation frequency
4. Position and distance relative to J16 (or other closely associated pod members)s
5. Foraging activity
6. % time spent logging

Local whale watching vessels will be notified (via the PWWA) and asked to avoid the area when monitoring efforts are taking place. SoundWatch, WDFW Enforcement, and NOAA Office of Law Enforcement will be notified when this activity takes place, and will help to maintain a greater than 200 yard buffer around the area. Throughout phase 3, a member/s of the team will be designated to observe for incidental interactions (this job will be designated once boat configurations of personnel are determined).

Phase 2. Initial Feeding

Initial feeding will be tried using live caught wild Chinook salmon, provided and transported by the Lummi Nation. The goal of the initial feeding will be to see if J50 will accept fish via this delivery method, and to see if we can ensure J50 is the only animal consuming the fish we deliver prior to delivering medication to her. Dietary supplementation will be with fish of the highest quality and fat content available.

The fish will be obtained through reef & purse seine fisheries, rod & reel, or collected as fish return to hatcheries. Care will be taken not to damage fish so that there is minimum die-off in the process.

A sample of the fish being fed will be provided to NOAA for analysis of caloric value. Additionally a scale will be collected from each fish prior to release into the water so that it can later be compared with genotyping done on any scales collected in the path of J50 after feeding.

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The fish will be transported by the Lummi Nation's enforcement boat (or similar vessel – see Fig.5), in a 6' diameter by 3' deep circular fish transportation tank. Fresh cold sea water will be circulated in the tank at all times to keep the fish in the best condition possible.

Fig.5 - Lummi Nation boat proposed as fish delivery vessel (or similar).

J50 will be observed at a workable distance prior to the deployment of the fish. Ideal conditions for deployment will be if/when J50 separates from other members of her pod. This will allow for positioning of the fish delivery vessel (FDV) approximately 50-100 meters in front of the animal. The vessel will pace J50s speed and wait for the animal to surface directly behind the boat before attempting to deploy the fish. The FDV will maintain slow or idle speed when within 300 meters of J50 (or any other SRKW).

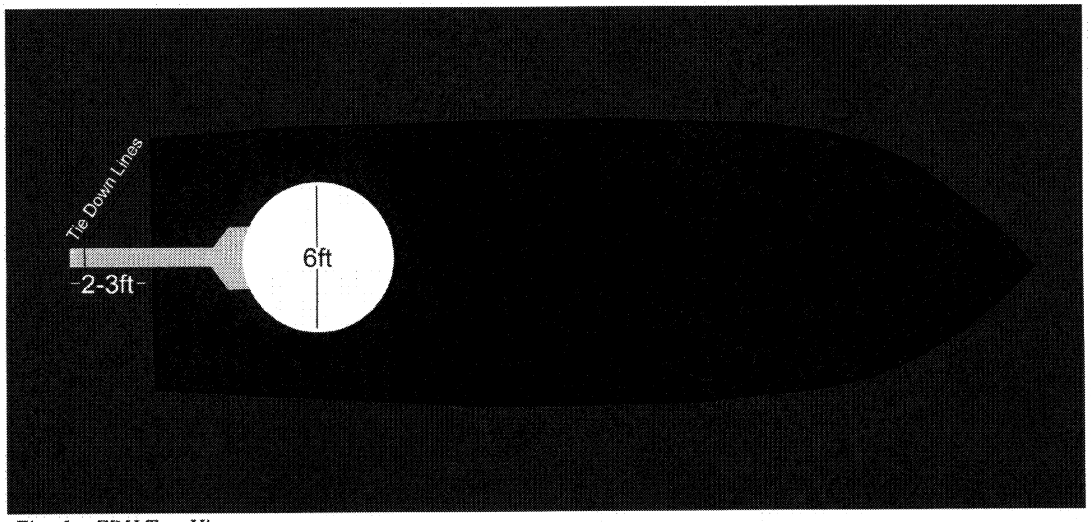

Fig. 6 – FDV Top View

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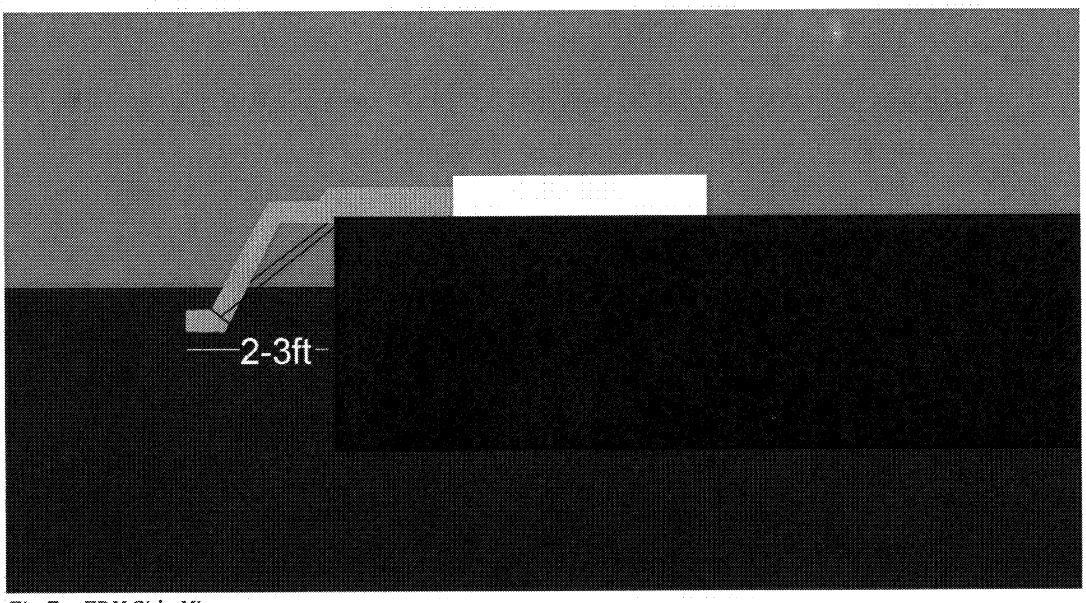

Fig.7 – FDV Side View

A funneled chute with 8" diameter PVC pipe will be attached to the fish transportation tank. The PVC pipe will extend from the transport tank into the water approximately 12" under the surface and 2-3 feet behind the transom of the boat. Overflow from the tank will be diverted down the chute through the PVC pipe so that when a fish is placed in the chute, the fish can easily slide down the pipe in a constant stream of water. The fish will end up in the bubble slipstream behind the vessel (fig 6 & 7). This method will ensure that there will be minimal damage to the fish, as well as minimize acoustic distinction on which J50 can associate the fish with the FDV.

Fish deployment will be attempted under close observation (via UAV and robust on-water observations from multiple vessel platforms) to confirm whether or not J50 shows interest in and successfully consumes the fish being fed.

A boat will be designated to follow J50 after her period of contact with the fish release area, and attempt to collect scales and other signs of predation that can be genotyped and compared to the fish released.

On the initial attempt, 2-4 fish will be deployed to see how J-50 responds. Although these fish will be disoriented, it is likely that the fish will dive to the bottom, which may lead to difficulties in determining if J50 is consuming the fish (unless obvious foraging behavior is observed). It is important to have confirmation of successful and reliable consumption of deployed fish prior to moving to phase 3.

J50 is likely to shred the fish deployed depending on their size, so it may be possible to add an small number of empty pill capsules to the fish. When she shreds the fish

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this will allow for the pill bottles to float up to the surface helping to confirm that J50 has consumed the fish. Simultaneously, this will indicated whether pills placed in the fish is an effective deliver method or other methods of medicating the fish should be considered (i.e. she takes the fish but does not consume the pills).

If necessary, the Chinook can be stunned in fresh water to deplete their oxygen and slow them down. Similarly, tail and pectoral fins of the salmon can be trimmed to slow the fish down. Additionally, fish can be marked with things that will pass through J50 so that there may be the opportunity for confirmation of consumption through fecal collection (beads, corn, small tags).

Fecal samples will continue to be collected throughout the feeding effort when the opportunity arises.

Local whale watching vessels will be notified (via the PWWA) and asked to avoid the area when feeding efforts are taking place. SoundWatch, WDFW Enforcement, and NOAA Office of Law Enforcement will be notified when this activity takes place, and will help to maintain a greater than 200 yard buffer around the area. Throughout phase 3, a member/s of the team will be designated to observe for incidental interactions (this job will be designated once boat configurations of personnel are determined).

Mitigating Boat Association

Ideally, the same vessel will be used as the FDV throughout the response. If feasible, a pinger (designed to play and unique acoustical signature not found in the environment) will be used in association with the FDV to ensure that J50 does not learn to associate boats in general with fish.

Caloric Requirements

The caloric requirement correction factor to use for the difference in behavioral budget between wild and captive killer whales is not known. Food volumes may be more meaningfully extrapolated, because hydration is derived from the food fish. Fish is ~70% water (wt/wt).

The total daily food intake of a 4 yr old female KW at SeaWorld is in the range of 30-35 kg of fish per day, but the mean length of a 4 yr old KW at SeaWorld is ~420 cm. The total daily food intake of a 321 cm long female KW at SeaWorld is in the range of 25-30 kg of fish per day. Based on this, even if caloric requirements are higher by 50% because of activity budget, Dr. Hendrik Nollens would estimate her total daily food intake to be in the 30-40 kg range. Non-spawning Atlantic salmon has close to the same caloric content of herring. Capelin is more lean. Correcting for

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this diet difference, Dr. Nollens would estimate her total daily food in salmon-only to be around 30kg, and advised that 30-35 kg per day should be a good, close starting point.

Phase 3. Administer Oral Medication

Medication will be administered to J50 dependent on the outcome of the current and planned health assessment. When treatable and safe to do so, bacterial and fungal pathogens will be treated orally, and administered via fish feeding. Treatment for worms will also be considered. All medication will only be administered after it is confirmed through phase 2 that J50 is the sole animal successfully consuming the deployed fish.

If it is determined that J50 is actively and reliably consuming the fish, individual Chinook will be medicated prior to their deployment. It should be noted that medicated fish will not likely live long and medications should only be administered just prior to deployment.

A 6-12" fishing line will be attached to the snout of chin of the medicated fish. The 6-12" line will be 2-4lb test strength line, made of 100% biodegradable material (made by Eagle Claw). A heavier 20-40lb line will connect the 6-12" back to the boat. The heavier line will be secured to the FDV to help keep the fish on the surface so it will be easier to determine that J50 is consuming the medicated fish. This design will allow the lighter 6-12" line to easily break away when there is tension on the line, minimizing the amount of line consumed by J50. This tether method should be re-evaluated and acoustic pinger conditioning should be considered at the first sign of imprinting.

**This method may be used during phase 2 to confirm that J50 is consuming the deployed fish.*

Local whale watching vessels will be notified (via the PWWA) and asked to avoid the area when oral medication is being administered. SoundWatch, WDFW Enforcement, and NOAA Office of Law Enforcement will be notified when this activity takes place, and will help to maintain a greater than 200 yard buffer around the area. Throughout phase 3, a member/s of the team will be designated to observe for incidental interactions (this job will be designated once boat configurations of personnel are determined).

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Medications & Dosage

Medications List In Order Of Priority (*as advised by Dr. Hendrik Nollens*)

1. 5,250 mg levofloxacin, orally, once daily. (e.g. 7 x 750 mg Levaquin tablets)
2. 150 mg voriconazole, orally, once daily (e.g. 3 x 50 mg Vfend tablets)
3. 8,000 mg amoxicillin (without clavulanic acid), orally, once daily (e.g. 16 x 500 mg amoxicillin tablets)

**Cytologic analysis of the white patch behind J50's blowhole may indicate that the antimycotic voriconazole (#3) is not warranted.*

TIME FRAME

The timeframe for this response will be dependent on the location of J50 and her pod, and the availability of live Chinook and the resources needed to deploy them. Ideally, if J50 and her pod (the J16s) are within a workable location, phase 1 can begin immediately, with the goal of following with phase 2 & 3 as soon as the Chinook can be sourced.

POSSIBLE STOPPING POINTS

Progression of response phases is dependent on the success of the previous phase. The progression can be stopped at any time it is deemed in the best interest of the animal or unsafe to continue.

Other stopping points include:

1. Health assessment and monitoring deems no further progression of the phases is necessary (as advised by the team of advisors and experts).
2. Phase 2 does not result in any interest in fish by J50 (the response plan will need to be revised to take a different approach).
3. Phase 3 is completed and all medications have been successfully administered, and J50s condition has been improved (continued monitoring schedule should be determined at this time).
4. If J50 is determined to be under undo-stress from the response, based on observations and data collected by the expert team.
5. J50 expires prior to completing response.

RESPONSE PARTNERS

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This will be a coordinated effort between NOAA, WDFW, The Lummi Tribe, The Whale Sanctuary Project, SeaDoc, UW Center For Conservation Biology, Wild Orca, Center For Whale Research, Vancouver Aquarium, Sea World, SR3, SoundWatch, WDFW Enforcement, NOAA Office Of Law Enforcement.

The following panel of marine mammal veterinarians is currently consulting on the response plan and will continue to be involved throughout the process.

Dr. Joe Gaydos (SeaDoc)
Dr. Jim McBain (SeaWorld)
Dr. Hendrik Nollens (SeaWorld)
Dr. Martin Haulena (Vancouver Aquarium)
Dr. Pete Schroeder (US Navy)
Dr. Stephen Raverty (University of BC)
Dr. Frances Gulland (The Marine Mammal Center)

RESPONSE PERSONEL

The following personnel will be involved in this response at varying points, though the exact configuration of personnel on each boat at any given time will shift depending on needs of the effort and the availability of the individuals involved.

Dr. Joe Gaydos (SeaDoc)
Dr. Jim McBain (Sea World)
Dr. Hendrik Nollens (Sea World)
Dr. Martin Haulena (Vancouver Aquarium)
Dr. Stephen Raverty (University of BC)
Dr. Pete Schroeder (US Navy)
Lynne Barre (NOAA)
Dr. Brad Hanson (NOAA)
Candice Emmons (NOAA)
Dr. John Durban (NOAA)
Dr. Holly Fernbach (NOAA & SR3)
Jeff Foster (Whale Sanctuary Project)
Katy Foster (Whale Sanctuary Project)
Charles Vinick (Whale Sanctuary Project)
Stephen Jeffries (WDFW)
Dyanna Lambourn (WDFW)
Ken Balcomb (Center For Whale Research)
Dave Ellifrit (Center For Whale Research)
Dr. Sam Wasser (UW Center For Conservation Biology)
Dr. Deborah Giles (UW Center For Conservation Biology & Wild Orca)
Collette Yee (UW Center For Conservation Biology)
Kurt Russo (Lummi Nation)

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Jay Julius (Lummi Nation)
Jewel James (Lummi Nation)
**Additional persons to be named (Lummi Nation)*

Boats

Hurricane 733 (NOAA)
21ft Grady-White (UW)
Lummi Nation (see fig.1)
**Additional boats to be added*

DOCUMENTATION

It will be vital to document the whole process as thoroughly as possible, including data collection and image/video collection. There is much to be gained from this event and it is important that we all learn from it – to not only ensure that we are actually moving forward in this case, but also to allow others to learn and expedite their action plan should they encounter a similar situation in the future. All documentation will be submitted to and held by NOAA.

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APPENDIX A

J50 PROPOSED HEALTH ASSESSMENT OF RECOVERED BLOW AND FECAL SAMPLES

INSTRUCTIONS FOR SAMPLE PROCESSING ON-BOARD:

Exhaled breath samples*:

If feasible, breath samples should be collected simultaneously on blood agar, Sabouraud's, salt enriched agar, and a sterile empty petri dish. If this is not possible, the exhaled breath should be collected on a sterile petri dish with no media.

1. If breath samples are collected on separate Blood agar, Sabouraud's, salt enriched agar plates:
    a. Close lid after sample collection, label, tape shut and keep cool until shipping.
2. If only a single sterile empty collection plate(s) is used to collect the breath sample, then sub-sample the surface with sterile swabs:
    a. With 1 swab, prepare smears on 3 glass slides. Label and place the slides in a secure area and air dry. Keep at room temperature until shipping to SeaWorld.
    b. Collect 2 swabs in transport media for bacteriology (Ames) and 2 replicate dry swabs for fungal culture. Keep the swabs for fungal culture dry and in separate sterile containers. Keep cool and ship 1 bacteriology swab and 1 fungal swab each to SeaWorld and UC Davis.
    c. Place a third swab RNA Later® or retain dry and place in a sterile container. Refrigerate until shipped to UC Davis and NOAA.

Fecal samples*:

1. Place replicate samples of 2-4 ml of feces in 3 separate sterile containers and chill.
2. Place one sample of 1.0 ml of feces in a sterile container for molecular analysis and possible electron microscopy. Maintain chilled until shipping.
3. Swab the fecal sample using a Teflon or cotton swab. Place either in RNA Later® or a sterile container for microbiome studies. Keep at room temperature or chilled until shipment.

*Surplus samples should be inventoried and kept chilled.

INSTRUCTIONS FOR SAMPLE SHIPPING AND PROCESSING ON LAND:

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Samples should be collected as early in the day as possible and shipped that afternoon to expedite overnight delivery to reference laboratories. The labs and contact information are provided below. When shipping, please inform Dr J Gaydos to ensure the labs are prepared to receive the samples and case submission forms are included.

Sample	Lab	Status/Disposition
Breath sample	UC Davis	
Breath sample	SeaWorld	
Breath sample	Dr Linda Rhodes	
Fecal sample	UC Davis	
Fecal sample	SeaWorld	
Fecal sample	Dr Linda Rhodes	
Fecal sample	Dr Chelsea Wood	

REFERENCE LABORATORIES AND CONTACT INFORMATION

Microbiology and molecular studies
Dr Tracey Goldstein
School of Veterinary Medicine
Wildlife Health Center
University of California,
1 Shields Avenue,
Davis, California, 95616-8734
(530) 752-4167
FAX (530) 752-3318
http://www.vetmed.ucdavis.edu/whc

Diagnostic microbiology, parasitology and clinical pathology
Dr Hendrik Nollens
SeaWorld San Diego
Veterinary Services
500 SeaWorld Dr
San Diego CA 92109
(619) 606-6178

Microbiome, fecal hormones and prey analysis
Linda D. Rhodes, Ph.D.
Program Manager, Marine Microbes & Toxins Program
Northwest Fisheries Science Center, NOAA Fisheries
2725 Montlake Boulevard East
Seattle, WA 98112 USA
(206) 860-3279

Parasitology

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Chelsea L. Wood, Ph.D.
Assistant Professor
University of Washington
School of Aquatic and Fishery Sciences
Box 355020
Seattle, WA 98195-5020
(831) 324-3076
[redacted]

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Wong, Eva

From: Jones, Lisa Ann
Sent: August-06-18 7:42 PM
To: Brekke, Heather
Subject: FW: Briefing Binder Materials - SRKW Indigenous and Multi-Stakeholder Advisory Group Mtg July 30
Attachments: Draft Agenda for July 30 FINAL sent to Participants.docx; SRKW Indigenous and Multi-stakeholder Advisory Group DRAFT TOR - Sent to Participants.docx; SRKW advisory group - stakeholder and FN participant list.docx; 1. Udpate - MMR Amendments.ppt; 2. aRS CH RKW_SRKW Advisory Meeting July 30_2018 KL.pptx; 3. Update - ECHO Update - Govt Canada.pptx; 4. Update - SRKW Science update July 2018.pdf; 5. Forward Agenda Discussion - SRKW Advisory Group.ppt; 1. ML_MMR_CGII_EN_2018-07-11_MINO (2).docx; 2. ML_SRKW_PetitionProtectionOrder.docx; 3. ML_Death of Calf of J35.docx; 4. FAQ 2018 Chinook + SRKW management actions.docx; 5. Status of SRKW announced measures under Whales Initiative - June 22.docx; 6. QAs for multi-stakeholder forum June 27.docx; 7. 2018 07 16 - Letter from Ecojustice to Ministers and Deputy Ministers - Protections for SRKW (2).pdf

FYI – here are the materials that I last had access to for the meeting.

I will send you my summary notes on this meeting on Wednesday and will also send along what the Secretariat puts together. The RKW ops meeting was basically a summary of this meeting.

Cheers
Lisa

From: Harber, Lee
Sent: August-03-18 11:28 AM
To: Jones, Lisa Ann
Subject: FW: Briefing Binder Materials - SRKW Indigenous and Multi-Stakeholder Advisory Group Mtg July 30

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Harber, Lee
Sent: 2018–July-27 3:39 PM
To: Johal, Sharan; Okahori, Karen; Barton, Meagan; Dhesi, Kiran; Fogliato, Cara
Subject: Briefing Binder Materials - SRKW Indigenous and Multi-Stakeholder Advisory Group Mtg July 30

Hi there,

Please find attached the briefing materials package. There are 2 items outstanding which are highlighted below and just being finalized / reviewed. I will send these items as soon as they are ready.

==========

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Key Meeting Documents:

1. Agenda
2. Draft Terms of Reference
3. Summary Report from June 22nd meeting
4. Participant list

Speaking Points

1. Ministers Wilkinson's Speech
2. Forward Agenda discussion Deck for Rebecca

Update Presentations

1. Amended MMR's
2. Update on proposed New Critical Habitat under Amended RKW recovery strategy
3. Lateral Displacement in Strait of Juan de Fuca / Vessel Slow Down in Haro Strait
4. DFO science research updates

Background materials:

1. Media Lines – amended MMR's
2. Media Lines – EPO
3. Media Lines – death of Calf of J35
4. FAQ on Fisheries Management Actions (Chinook Fishery Closures 2018)
5. Table -Status of SRKW Measures under whales initiative
6. Table – General Q&A on SRKW Related Issues
7. Letter from Ecojustice letter on July 16

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
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SOUTHERN RESIDENT KILLER WHALES
INDIGENOUS AND MULTI-STAKEHOLDER ADVISORY GROUP

AGENDA

Monday July 30, 2018 9:30 am- 12:30 pm
Location: 401 Burrard St. Room
2nd Floor, Boardroom C and D

Time	Agenda Item	Objective & Materials	Presenter(s)
9:30AM – 10:15AM *(45 mins)*	**Welcome, Opening Remarks & Introductions** • Opening Remarks • Review Agenda • Ratify Summary Report from first meeting	Materials: 1. Draft Agenda 2. Summary Report: June 22	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region
10:15AM-11:15AM *(1 hour)*	**Updates / Recent Developments** 1. Update on amended Marine Mammal regulations 2. Opportunity for participants to provide other updates 3. Update on proposed New Critical Habitat under Amended RKW recovery strategy 4. Other updates (non-federal) 5. Lateral Displacement in Strait of Juan de Fuca / Vessel Slow Down in Haro Strait 6. Science Activities	Materials: 1. PowerPoint Presentations on each of the updates to be provided at the meeting. 2. Other hand-out's on updates.	Update 1: **Andy Thomson**, Regional Director, Fisheries Management, DFO Update 3: **Cheryl Webb**, Regional Director, Ecosystem Management, DFO Update 5: **Michelle Sanders**, A/Director General, Environmental Policy, TC and ECHO Update 6: **Carmel Lowe**, Regional Director, Science, DFO
11:15AM-12:15PM *(1 hour)*	**Review draft Terms of Reference** Discussion based on draft Terms of Reference and guiding question in document. **Discuss Forward Agenda** Overview of proposed areas for discussion going forward.	Objective: Review draft Terms of Reference & discussion on priority areas for discussion in supporting the establishment of a forward agenda. Materials: 1. Draft Term of Reference 2. Presentation on forward agenda discussion (provided at the meeting).	**Chair: Rebecca Reid** Regional Director General, Fisheries and Oceans Canada – Pacific Region Discussion with input from all participants.
12:15AM – 12:30PM *(15 mins)*	**Closing Remarks** Next Steps & Action Items	Objectives: Identify next steps & action items	**Chair: Rebecca Reid** Regional Director General, DFO – Pacific Region

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Participant List for Follow-up Meeting

Sector	Name	Position	Affiliation
Indigenous representatives			UBC
			First Nations Summit
			FNFC
			FNFC
			FNFC
NGOs			Raincoast Conservation Foundation
			Georgia Strait Alliance
			WWF Canada
			David Suzuki Foundation
			Natural Resources Defence Council
			Vancouver Aquarium [Oceans Wise / CORI Team]
Shipping Industry			Port of Vancouver
			Shipping Federation of Canada
			Chamber of Shipping
			Canadian Ferry Association
Fishing Industry			Sport Fishing Advisory Board
			BC Seafood Alliance
Whale Watching			Pacific Whale Watching Association
Provincial Government	Mark Zacharias (alternate: Jennifer McGuired, ADM, Environmental Sustainability)	Deputy Minister	Ministry of Environment and Climate Change Strategy
Municipal Government			Metro Vancouver Regional District

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Update: Amended Marine Mammal Regulations

SRKW Indigenous and Multi-Stakeholder Advisory Group
July 30, 2018

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Overview

The amendments were published in the *Canada Gazette, Part II* on July 11, 2018.

- These amendments are based on past consultations with various industries, the scientific community, and environmental non-governmental organizations.
  - They reflect actions already being taken voluntarily by some commercial boaters involved in marine mammal watching.
- These amendments include measures to reduce disturbance associated with vessel presence, which is a recovery objective for the Southern Resident killer whale.

Canada

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The amendments to the *Marine Mammal Regulations* include:

- Expanding the scope of application of the Regulations to include conservation and protection of marine mammals in Canada and Canadian fisheries waters.
- Regulating marine mammal watching.
- Defining "disturb" in the Regulations.
- 200 m for all killer whale populations in B.C. and the Pacific Ocean
- Introducing a general minimum approach distance of 100 m for whales, dolphins and porpoises.
- Providing alternative approach distances that are tailored to particular circumstances, including minimum approach distances of :
  - 200 m for all killer whale populations in B.C. and the Pacific Ocean

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Defining "Disturbance"

Disturbance includes:

- feeding, swimming or interacting with a marine mammal;
- moving a marine mammal (or enticing/causing it to move);
- separating a marine mammal from its group or going between it and a calf;
- trapping a marine mammal or a group either between a vessel and the shore, or between a vessel and other vessels; or
- tagging or marking a marine mammal.

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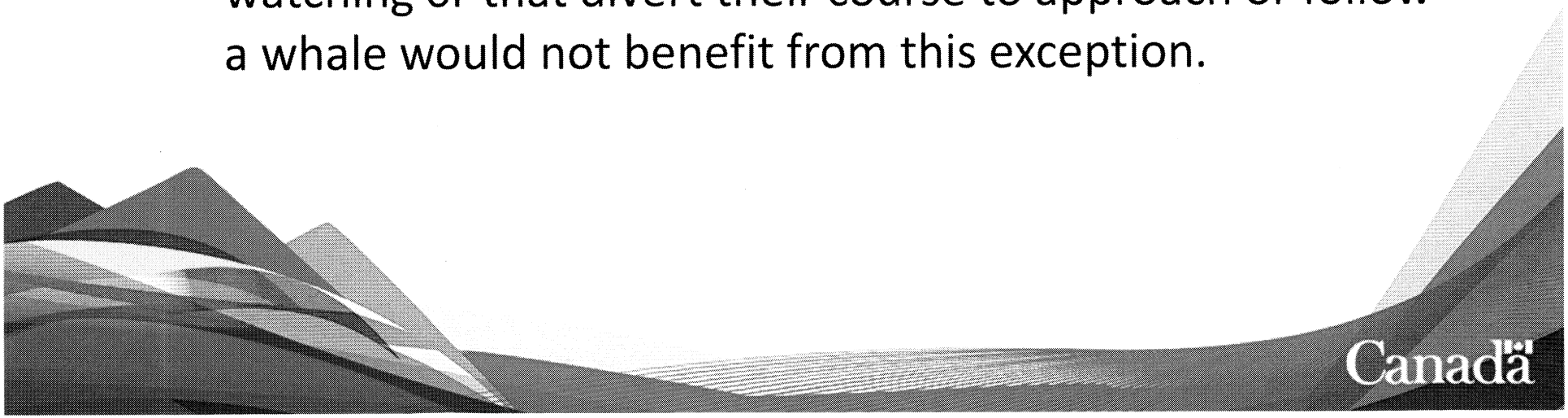
Who do they apply to:

- These Regulations apply to all boaters including commercial and recreational boaters.
- Vessels that are in transit are exempt from the approach distance requirements in the Regulations.
  - However, vessels that are actively engaged in whale watching or that divert their course to approach or follow a whale would not benefit from this exception.



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Amended Recovery Strategy for Northern & Southern Resident Killer Whales

DFO Species at Risk Program

SRKW Indigenous & Multi-stakeholder Advisory Meeting

July 30, 2018

Canada

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Critical Habitat

- Defined by SARA as:
  - *"… the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species."*

- Required by SARA to be identified in a recovery document for threatened, endangered or extirpated species, based on the best available information.

- Within DFO, the process to identify CH is:
  - Is science-based and precautionary,
  - Does not consider socioeconomic factors – can be assessed when developing management actions to mitigate threats of ALTD CH,
  - Iterative, completed only when Minister is of the opinion that the quantity and quality of critical habitat identified is sufficient to achieve the species' population and distribution objectives.

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Amended Recovery Strategy

- The draft Amended Recovery Strategy:
  - Identifies two additional areas as proposed critical habitat,
  - provides additional clarification of the functions, features, and attributes for all critical habitat identified for Northern and Southern RKW,

- December 2018 - Target completion date
  - CH Protection Order is being developed concurrently, for same completion date

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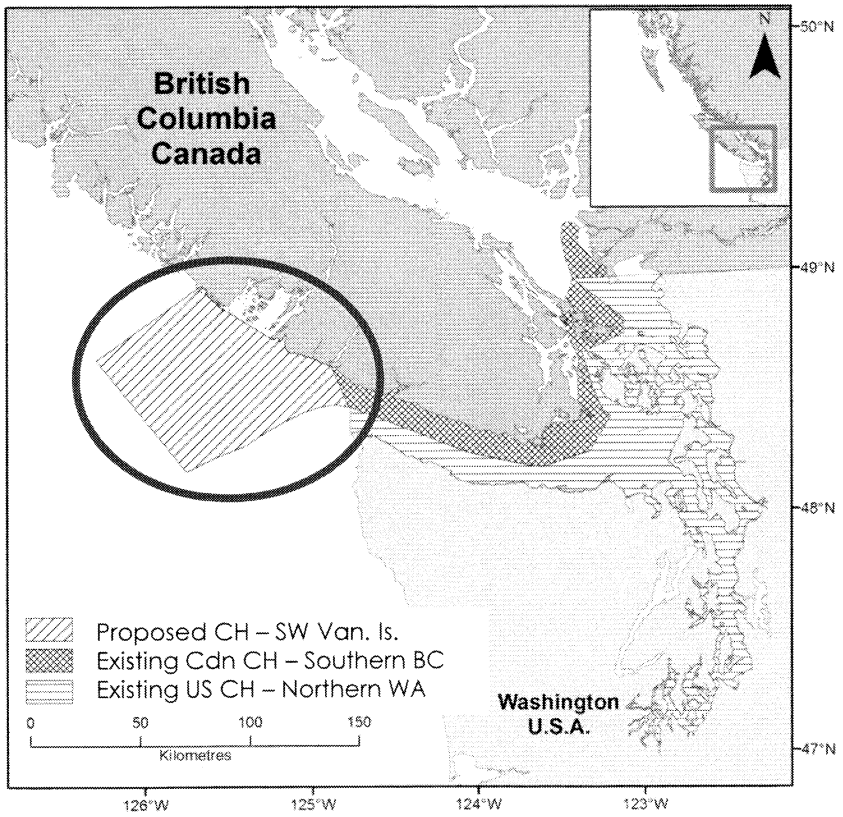
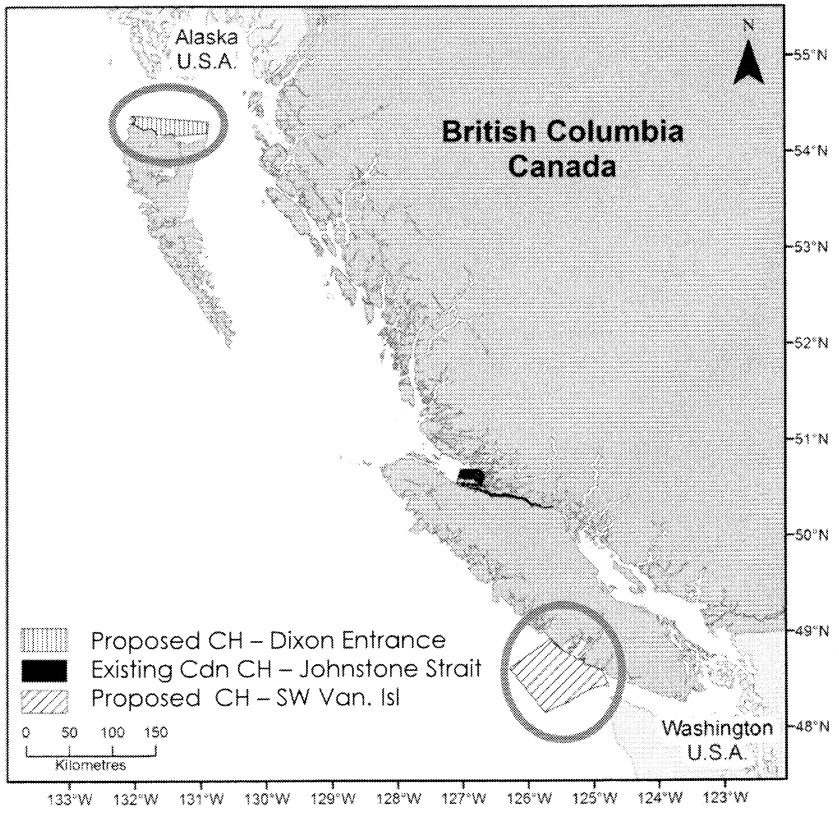
Existing and Proposed Critical Habitat

Existing and Proposed CH for SRKW



Existing and Proposed CH for NRKW



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Development Timeline

Task	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Document development	4 months										
External Review					30d						
Revisions & Regional DFO/PCA Approval							Statutory Timeline – can't be less				
Proposed posted								60d	Statutory Timeline – can't be more		
Revisions									30d		
Final to Minister											
Final Posted											

001348

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Protection of Critical Habitat

- CH legal protection process
  - Existing RKW CH is protected under a Critical Habitat Order (CHO)
  - Anticipated that additional proposed RKW CH will also be legally protected under a CHO

- A CHO prohibits destruction of features, functions, attributes of identified CH
  - RS provides examples of human activities likely to destroy CH if unmitigated
  - Activities are not automatically prohibited

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ANNEX – ADDITIONAL DETAIL ON AREAS OF PROPOSED

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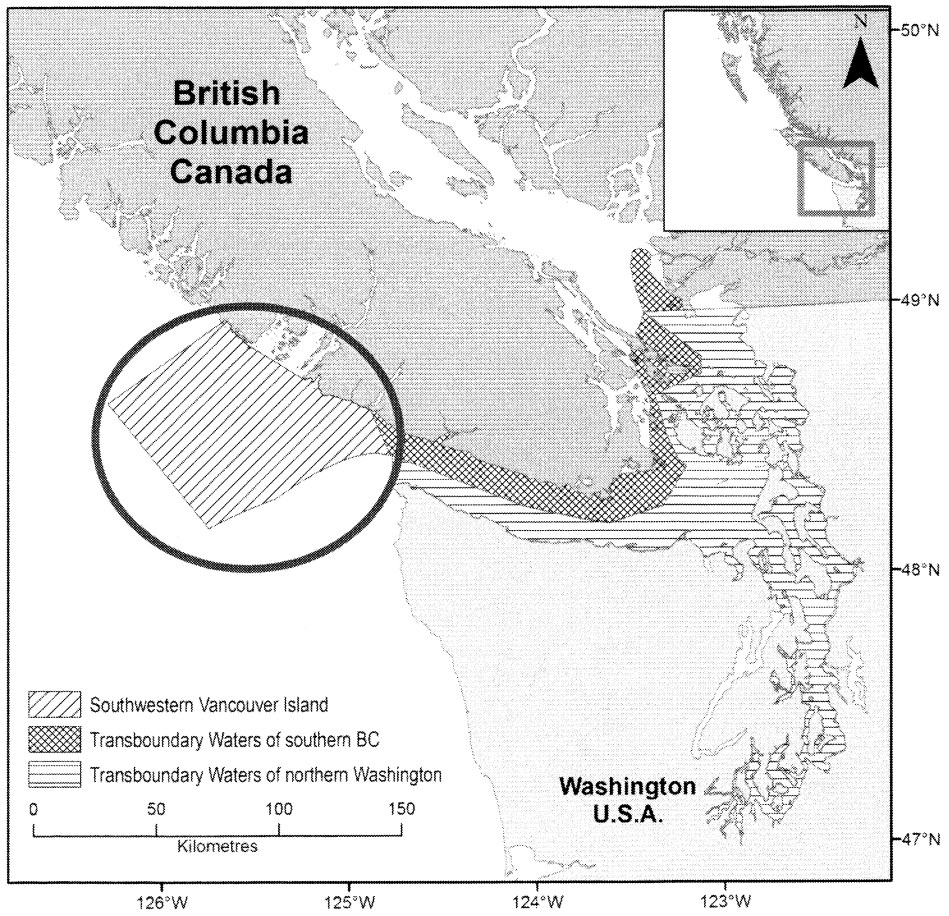
Southwestern Vancouver Island

- Vessel surveys, passive acoustic monitoring (Aug. 1 2009 to July 31, 2011)
- Used throughout the year by SRKW and NRKW
- A primary habitat used by SRKW during May-September when they are outside existing CH area
- 201 predation events, 88% Chinook



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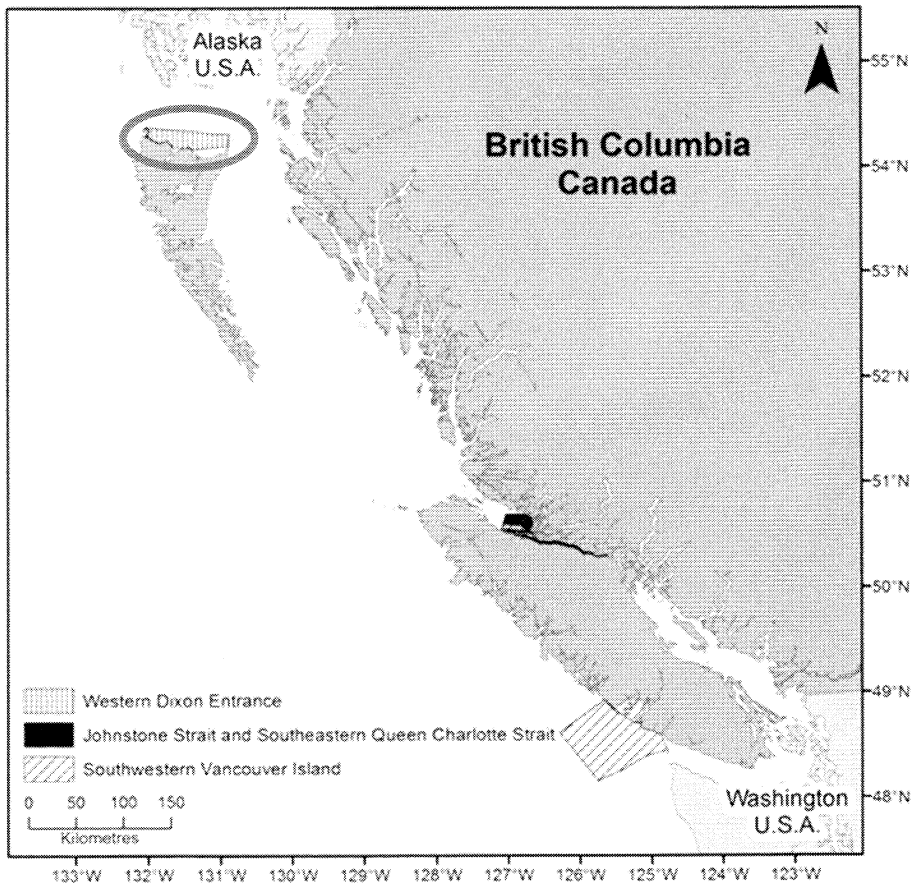
Western Dixon Entrance

- Vessel surveys, passive acoustic monitoring (2009-2012)
- Used year-round by NRKW, especially late winter and spring
- Used by members of NRKW population that rarely use existing CH
- 80 predation events, all but one were Chinook



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Update on ECHO Program 2018 Initiatives

SRKW Indigenous and Multi-Stakeholder Advisory Group

July 30, 2018

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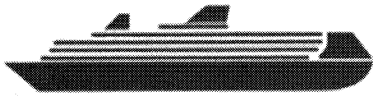
2018 voluntary vessel slowdown in Haro Strait

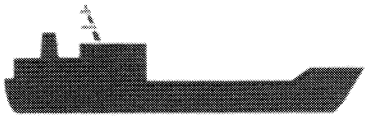
15kn

or less for vehicle carriers, cruise and container vessels



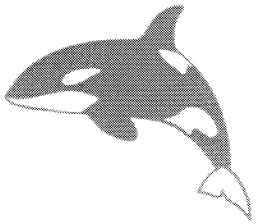
12.5kn

or less for bulkers, tankers and government vessels



Dynamic

start and end dates based on whale presence



80%+

participation goal

Anticipated delays (with transition time):

Vessel type	Inbound (mins)	Outbound (mins)
Bulk	13	12
Container	18	16
Cruise	11	10
Tanker	14	13
Vehicle	13	12

Anticipated noise reduction:

Similar to last year

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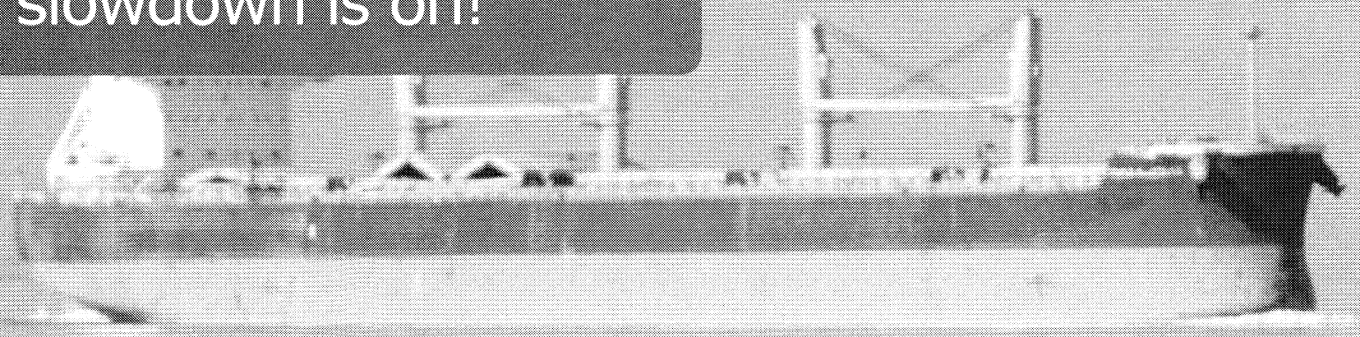
The slowdown is on!



- Slowdown began on July 12
- Whales confirmed in Haro Strait by the Whale Museum and BC Cetacean Sightings Network
- Whales have remained in the area since

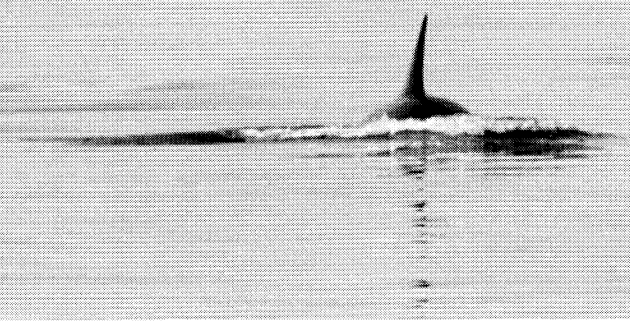


Photo: Paul Nyhan

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Southern resident killer whale named Echo (J42) and participating bulk vessel during first week of slowdown

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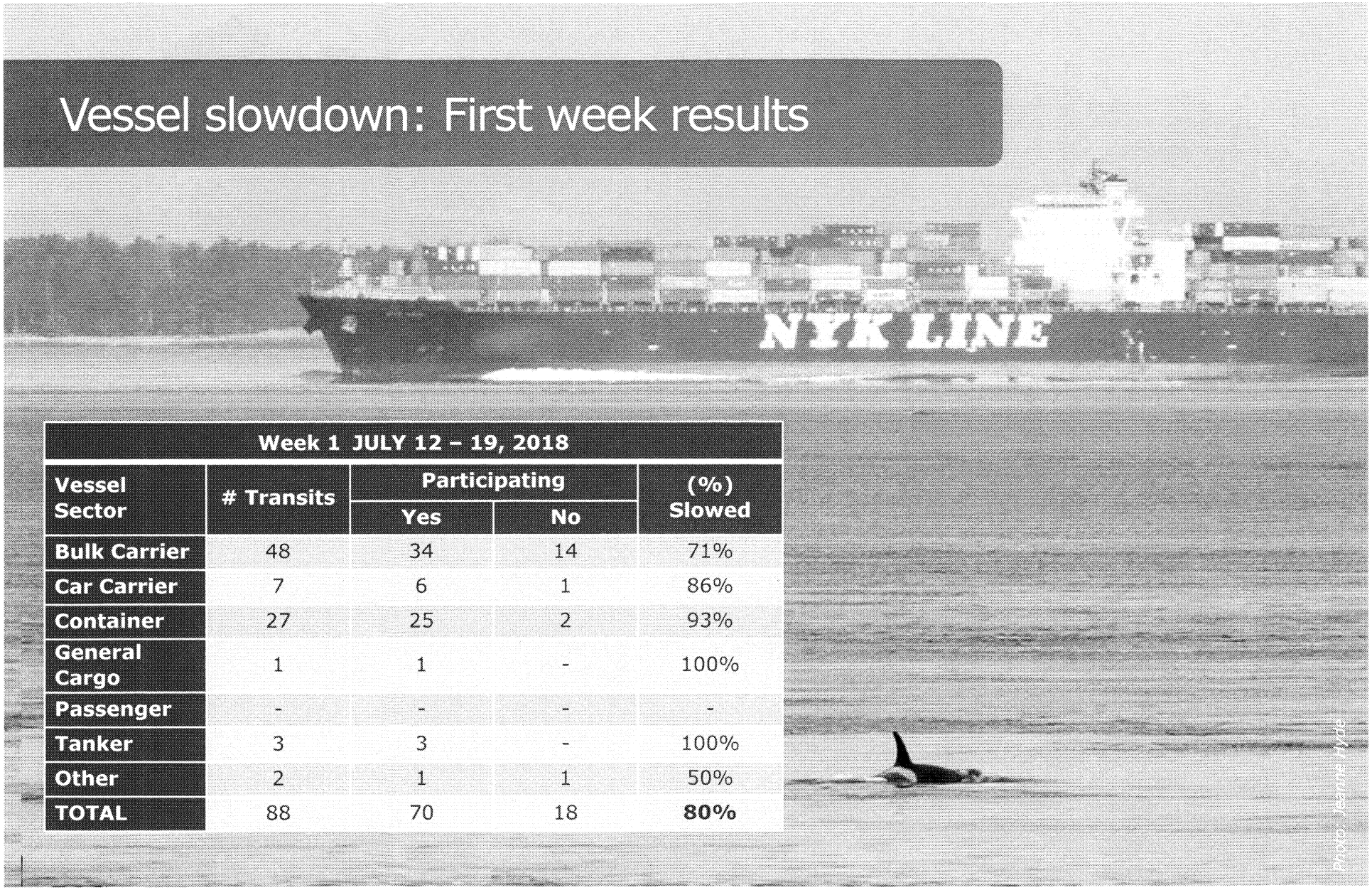
Vessel slowdown: First week results



Week 1 JULY 12 – 19, 2018				
Vessel Sector	# Transits	Participating		(%) Slowed
		Yes	No	
Bulk Carrier	48	34	14	71%
Car Carrier	7	6	1	86%
Container	27	25	2	93%
General Cargo	1	1	-	100%
Passenger	-	-	-	-
Tanker	3	3	-	100%
Other	2	1	1	50%
TOTAL	88	70	18	**80%**

Photo: Jeanne Lyne

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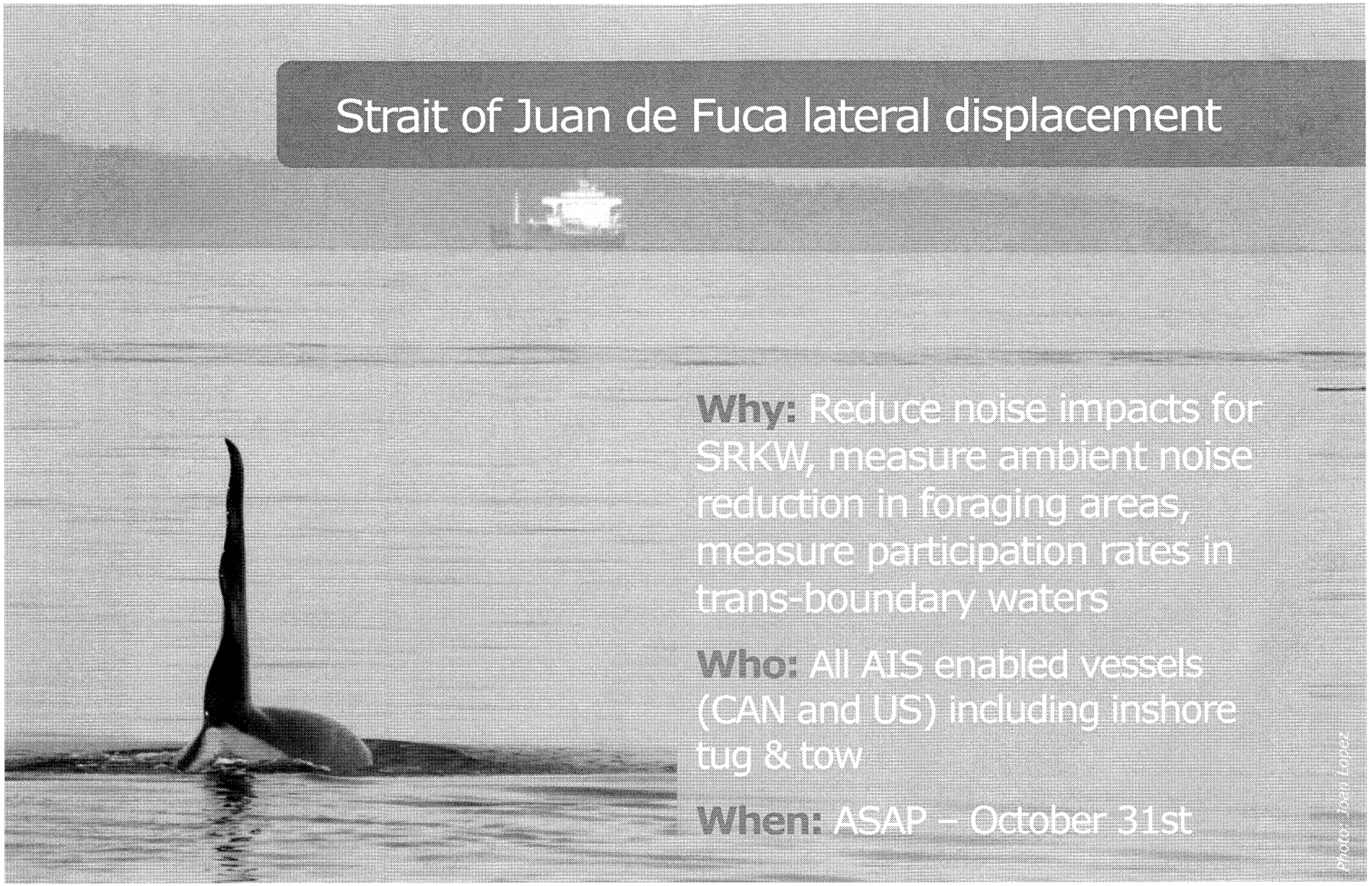
Strait of Juan de Fuca lateral displacement



Why: Reduce noise impacts for SRKW, measure ambient noise reduction in foraging areas, measure participation rates in trans-boundary waters

Who: All AIS enabled vessels (CAN and US) including inshore tug & tow

When: ASAP – October 31st

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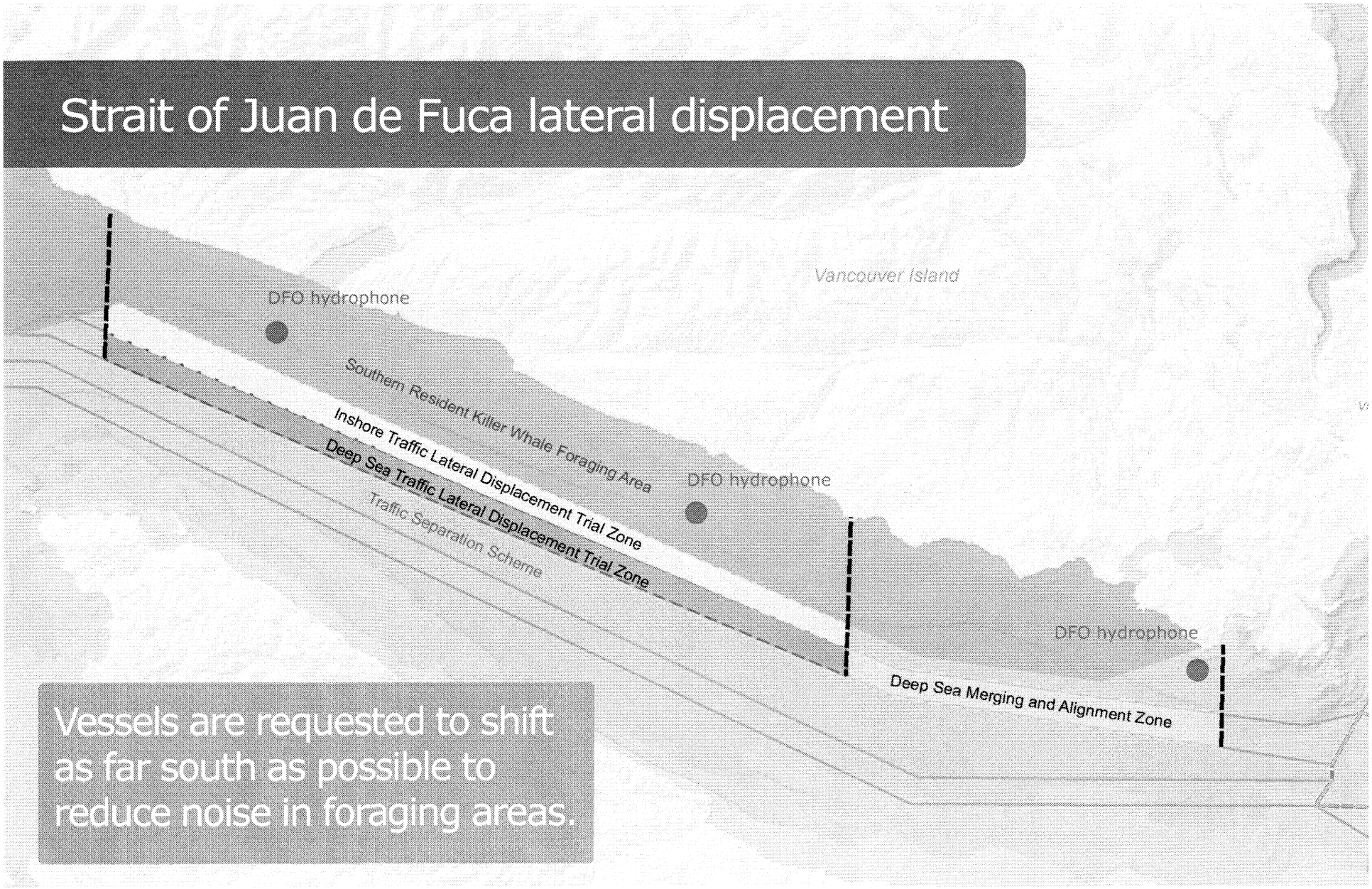
Strait of Juan de Fuca lateral displacement



Vessels are requested to shift as far south as possible to reduce noise in foraging areas.

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Postcard for deep sea traffic - DRAFT

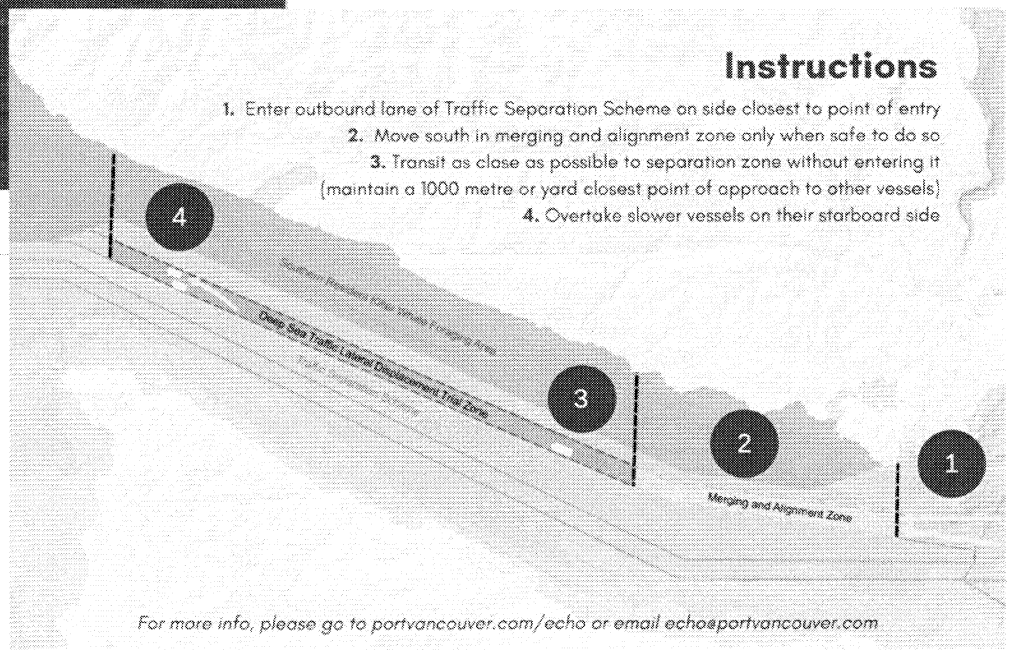
STRAIT OF JUAN DE FUCA VOLUNTARY LATERAL DISPLACEMENT TRIAL

MOVE SOUTH TO REDUCE UNDERWATER NOISE IN KILLER WHALE FEEDING AREAS
AUGUST X - OCTOBER 31

If it is safe and operationally feasible to do so, all vessels transiting outbound through the Strait of Juan de Fuca are requested to **navigate as far south as possible within the outbound lane** of the traffic separation scheme, in the area between 124° West and 124° 40" West. This voluntary trial does not relieve your vessel of its obligations under the Collision Regulations. Any instructions from Vessel Traffic Service supersede the trial.

Instructions

1. Enter outbound lane of Traffic Separation Scheme on side closest to point of entry
2. Move south in merging and alignment zone only when safe to do so
3. Transit as close as possible to separation zone without entering it (maintain a 1000 metre or yard closest point of approach to other vessels)
4. Overtake slower vessels on their starboard side



For more info, please go to portvancouver.com/echo or email echo@portvancouver.com

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Pages 1360 to / à 1361

are not relevant

sont non pertinentes

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Southern Resident Killer Whale
Indigenous and Multi-stakeholder Advisory Group

Terms of Reference
(DRAFT)

1. BACKGROUND

As identified at the October 2017 Symposium for the Southern Resident killer whale (SRKW) and the recent *Whales Initiative* technical briefing and roundtable discussion on June 22, 2018, this Advisory Group has been established by the federal departments of Fisheries and Oceans Canada, Transport Canada, and Environment and Climate Change Canada to bring together Indigenous groups, multiple stakeholders, and implicated jurisdictions to facilitate communication and coordination of activities to recover SRKW.

This advisory group does not replace the Crown's Duty to Consult and accommodate nor does it replace the regular engagement and consultation on individual initiatives and measures related to SRKW recovery.

2. OBJECTIVES

The main objectives of the advisory group will be to:

a. Provide a forum for the participants to discuss actions underway and planned by federal departments and others to protect SRKW, and to allow participants to provide advice on recovery actions and to share information to help inform government decision-making.

b. Promote dialogue and improve shared understanding of the complexities of SRKW recovery, shared responsibilities, and respective authorities of Advisory Group participants to reduce SRKW threats.

c. Identify opportunities for collaboration and partnership that can advance the collective implementation of the recovery measures identified in the Species at Risk *Action Plan for Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada* (2017), Oceans Protection Plan (2017) the Science Based *Review of the Effectiveness of Recovery Measures for Southern Resident Killer Whales* (2017), and the measures announced under the federal *Whales Initiative* on June 22, 2018 to promote recovery of the species.

Discussion question: Are there specific milestones or deliverables that you would like to identify under these objectives?

3. GOVERNANCE AND MEMBERSHIP

The Indigenous and Multi-stakeholder Advisory Group will consist of representatives from various Indigenous and stakeholder groups: indigenous communities, Non-Governmental Organizations (NGO),

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the shipping and marine transportation, fishing, and whale watching sectors, the Government of British Columbia, and Metro Vancouver Regional District.

The Advisory Group will be chaired by the Regional Director General of Fisheries and Oceans Canada (DFO), with ex-officio participation of senior officials from DFO, Transport Canada, and Environmental and Climate Change Canada.

The Advisory Group secretariat will report out on the discussions that were held and the recommendations made, noting the degree of support or divergence among members for advice on different issues.

If a member of the Advisory Group is unable to attend a meeting an alternate participant may attend on their behalf. Additional observers are welcome to listen to discussions however participation is limited to members or designated alternates.

The Advisory Group will refer to other existing technical committees and working groups as needed to address technical questions and issues. If, through discussion, a need or gap is identified, the Advisory Group may consider establishing supporting technical groups for specific purposes.

4. RESPONSIBILITIES OF PARTICIPANTS

Review circulated information.

Participate in meetings or assign alternate to attend.

Engage in open and respectful dialogue, seeking to understand and be understood.

Communicate out to their respective organizations/communities the activities and outcomes of this Advisory Group.

5. MEETING PROCESS

The Advisory Group is anticipated to meet up to 4 times per year however this may be adjusted by the chair, if needed. Teleconferencing and video conferencing will be used where possible to minimize travel demands.

Discussion question: How often should this group meet?

Federal departments will provide secretariat services to support meeting delivery and the preparation of summary meeting notes.

Advisory group participants will be invited to propose topics for future meetings. Agendas will be approved by the chair.

Discussion question: What do you feel should be a priority topic on future agendas?

6. REPORTING

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The Chair will disseminate meeting summary notes through the federal secretariat to this Advisory Group.

Individual participants of this Advisory Group will also report back to their respective organizations.

The Chair/secretariat will provide draft meeting summary notes that include a record of recommendations and follow up actions to all participants within two weeks of the meeting. The Advisory Group will have 2 weeks to review summary notes prior to their finalization.

7. LINKAGES

The Advisory Group may be informed and advised by other various and already established SRKW working groups and committees, which are generally threat-based. A list of other currently active groups is provided at Annex B.

Discussion Question: Are there other relevant or related working groups or discussion forums that should be included in this table?

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Annex A: Participant List

Sector	Name	Position	Affiliation	E-mail
Indigenous representatives			UBC	
			First Nations Summit	
			FNFC	
			FNFC	
			FNFC	
NGOs			Raincoast Conservation Foundation	
			Georgia Strait Alliance	
			WWF Canada	
			David Suzuki Foundation	
			Natural Resources Defence Council	
			Vancouver Aquarium [Oceans Wise / CORI Team]	
Shipping Industry			Port of Vancouver	
			Shipping Federation of Canada	
			Chamber of Shipping	
			Canadian Ferry Association	
Fishing Industry			Sport Fishing Advisory Board	
			BC Seafood Alliance	
Whale Watching			Pacific Whale Watching Association	

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Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca
Municipal Government			City of Vancouver	
Federal government	Rebecca Reid	Regional Director General, Pacific Region	Fisheries and Oceans Canada	Rebecca.Reid@dfo-mpo.gc.ca
	Carmel Lowe	Regional Director, Science, Pacific Region Science	Fisheries and Oceans Canada	Carmel.Lowe@dfo-mpo.gc.ca
	Andy Thomson	Regional Director, Fisheries Management	Fisheries and Oceans Canada	Andrew.Thomson@dfo-mpo.gc.ca
	Sylvie Lapointe	ADM, Fisheries and Harbours Management	Fisheries and Oceans Canada	Sylvie.Lapointe@dfo-mpo.gc.ca
	Michelle Sanders	Director, Clean Water Policy	Transport Canada	Michelle.Sanders@tc.gc.ca
	Megan Nichols	Director General, Environmental Policy	Transport Canada	Megan.Nichols@tc.gc.ca
	Yvette Myers	Executive Director, Oceans Protection Plan	Transport Canada	Yvette.Myers@tc.gc.ca
	Marc D'Iorio	DG, Industrial Sectors, Chemicals, and Waste Directorate	Environment and Climate Change Canada	Marc.diorio@canada.ca
	Cecilia Wong	Senior Ecosystem Scientist	Environment and Climate Change Canada	cecilia.wong@canada.ca
	Helen Davies	Field Unit Superintendent Coastal BC	Parks Canada	Helen.Davies@pc.gc.ca

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Annex B: Existing Working Groups/Committees			
Name of engagement activity	**Description**	**Purpose**	**Contact Person**
SRKW committee	Developed from need to have more engagement with First Nations and stakeholders around management measures for SRKW to reduce threat of prey availability and secondarily disturbance	ToR being drafted; but generally provide for engagement with First Nations and Stakeholders to discuss and get input on management actions for SRKW related to abating threat of reduced prey availability	Jeff Grout
Canada-United States			
Toxics Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. Toxics working group formed as one of the three to support the Task Force.	Identify, research, and analyze potential actions for consideration.	
Vessels and Noise Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of Southern Residents and necessary to secure a healthy and sustained population for the future. The Working Group on Vessels and Noise reports to the Washington State Southern Resident Killer Whale Task Force	To develop recommendations on actions to reduce physical and acoustic disturbance impacting SRKW.	
Prey Working Group*	Washington State Governor Jay Inslee issued Executive Order 18-02 that established the SRKW Task Force to identify, prioritize, and support the implementation of a longer term action plan needed for the recovery of	Identify range of actions to be considered to abate threat of reduced prey availability within Habitat, Harvest, Hydro, Hatcheries, Predations; prioritize, identify conflicts and synergies and deliver refined set of actions to Task Force to be considered in	Lisa Jones Federal Representative

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	Southern Residents and necessary to secure a healthy and sustained population for the future. Prey working group formed as one of three to support the Task Force.	final report due Nov.1 2018	
Salish Sea Transboundary Ecosystem Indicators (TBI) Project	The TBI project is led by Environment and Climate Change Canada (ECCC) and the United States Environmental Protection Agency (US EPA) to characterize the state of ecosystem health in the Salish Sea (overlaps with SRKW critical habitat) and convene subject experts to identify threats and responses to concerning trends. Ten indicators are tracked including SRKW abundance, toxics in the food web and chinook abundance. A public facing website supports communication of project outcomes.	The TBI project is a commitment under the ECCC - US EPA Statement of Cooperation to share information and foster collaboration on priority issues in the Salish Sea ecosystem.	
DFO/ National Oceanic and Atmospheric Administration prey working group	Group that has organized workshops to review and understand the science on prey availability for SRKW and identify potential management action.		
SRKW and Underwater Vessel Noise			
Enhancing Habitat Cetacean Observation (ECHO) Advisory Working Group (AWG)	The ECHO AWG brings together a broad spectrum of interests from Canada and US to address threats to at-risk whales.	The role of the AWG is to provide the ECHO program management team with input, advice and recommendations during the development and execution of the program's projects and initiatives.	
Enhancing Habitat Cetacean Observation (ECHO) Vessel Operators Committee (VOC)	The ECHO VOC was established in December 2016 to provide the ECHO Program team with advice, support and guidance pertaining to potential mitigation options that may directly impact the shipping industry.	To bring key stakeholders together to develop mitigation options to reduce underwater vessel noise	
Ship Noise Mitigation Risk Assessment	The Ship Noise Mitigation Risk Assessment was commissioned by Transport Canada to assess and quantify the navigation safety risks associated with introducing or	The purpose of the stakeholder engagement sessions was to present the results of the TC commissioned risk assessment, and seek feedback	

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	implementing potential mitigation measures to address underwater noise in the Salish Sea.	from key industry stakeholders, First Nations and US Tribes in the Salish Sea region.	

*** While the Government of Canada is actively participating in the sub-working groups in terms of information sharing and identifying opportunities for collaborations, it is only an observer on the Task Force and will not be part of recommendations made to the Governor.**

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Discussion: Forward Agenda

SRKW Indigenous and Multi-Stakeholder Advisory Group
July 30, 2018

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Setting the forward agenda

- Federal departments are currently working to deliver a wide range of SRKW recovery measures; this includes measures that are being delivered in collaboration with external partners
- In the June 22nd meeting, several key areas of interest were identified
- We are seeking your feedback on how to integrate the areas of key interest into a forward agenda of work for this advisory committee

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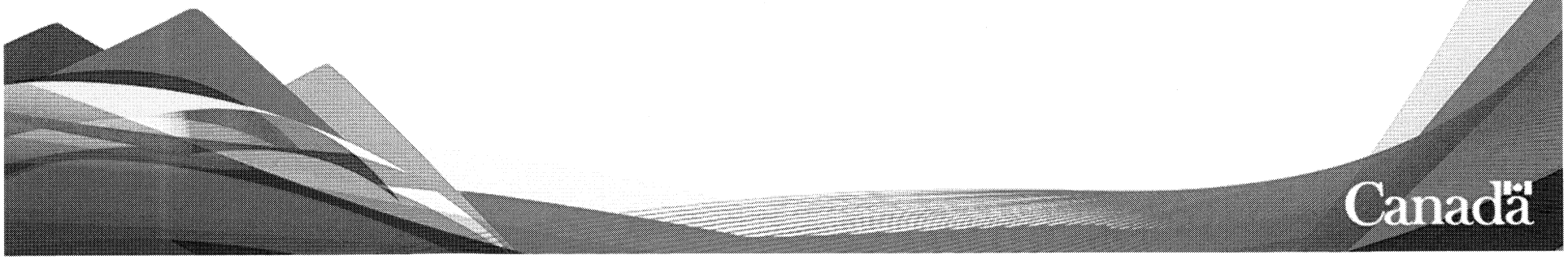
Setting the forward agenda

- DFO, TC, and ECCC are working together to support recovery of SRKW through a wide range of measures under 4 major initiatives:
  - 1) RKW Recovery Strategy & Action Plan, 2) Oceans Protection Plan, 3) Science-Based Whale Review, and 4) Whales Initiative.
- Efforts are organised around the key threats that have been identified:
  - i.e. prey availability, physical & acoustic disturbance, and contaminants.



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What we heard from you

- At the June 22 technical briefing and roundtable discussion, some key areas of interest were identified, including the importance of:
  - Ensuring compliance with recovery measures
  - Setting measurable targets (short & long-term);
  - Collaborating with Indigenous groups, the Province, and Stakeholders.

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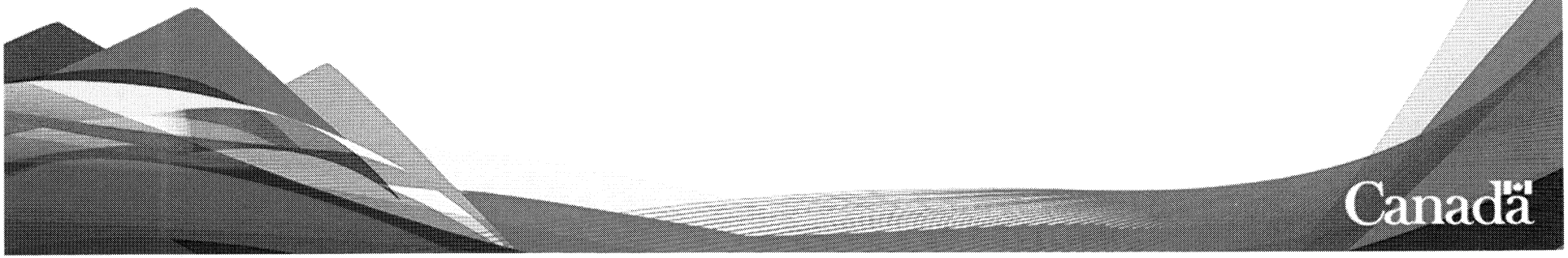
Proposed approach

- For each key threat, plan for future advisory committee discussions following this general template:
  - Overview presentations (from relevant government agencies and non-government partners) on current and planned priority activities supporting the abatement of the key threat:
    - Update on status, what's working, what is challenging, what have we learned, gaps
    - Overview of where and how measurable targets are being set (short/long-term)
    - Examples of monitoring and compliance activities
    - Opportunities for engagement and collaboration on recovery efforts
  - Roundtable discussion to solicit advice on advancing work on these themes

- Individual advisory committee meetings could be organised around this template for discussion for each of the three key threats



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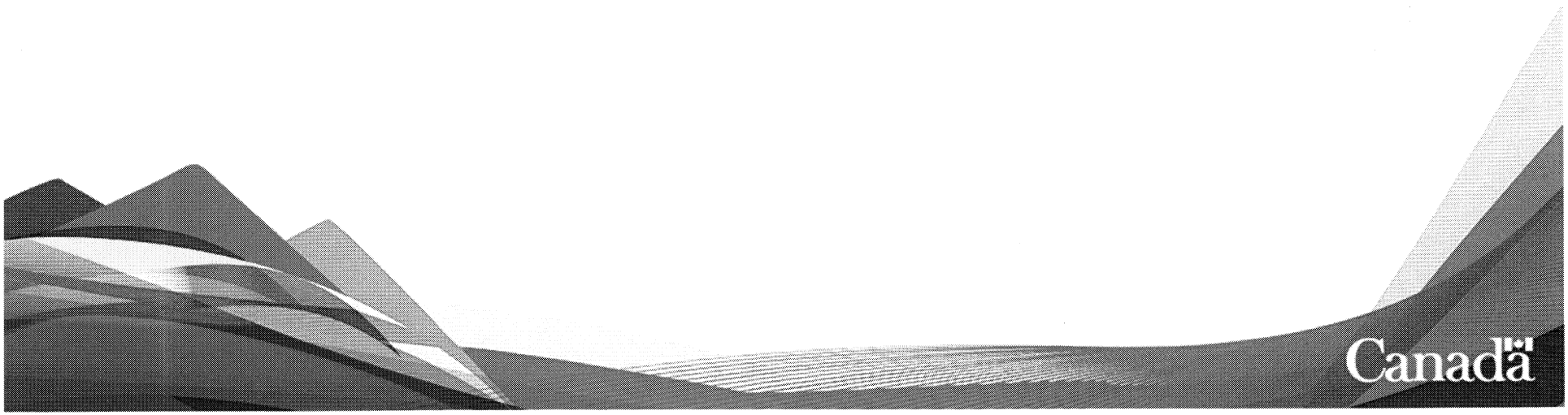
Questions

- Do you have comments or questions about this approach as a starting point for shaping future meetings with this advisory committee?
- Is there interest from advisory committee participants in presenting on work your organisations / sectors are involved with relating to SRKW recovery?



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MEDIA LINES

Petition For Emergency Protection Order For Southern Resident Killer Whales

Issue

Fisheries and Oceans Canada has been advised that on January 30, 2017 at 9 a.m. (Vancouver time), a group of ENGOs, under the umbrella of Ecojustice, will be petitioning Minister Leblanc for action on Southern Resident Killer Whales (SRKW), and making a press statement. The petition will be asking for an emergency protection order under section 80 of the Species at Risk Act (SARA) that would apply to all vessels (fishing, commercial, whale watching, ferries, pleasure) in the critical habitat of the species.

The critical habitat for SRKW has been identified on both sides of the Canada-U.S. border and includes Salmon Bank, Haro Strait and the Strait of Juan de Fuca. The petition would also ask to have action taken in Swiftsure Bank, an area not yet identified as critical habitat under SARA. Media attention is expected.

Desired Sound-bite

We are committed to the recovery of the Southern Resident killer whale and we continue to consider all available options to protect all marine mammals including this iconic species.

Media lines

- The Government of Canada is committed to the protection and recovery of Southern Resident killer whales.

- The Minister of Fisheries and Oceans Canada has received a petition asking for an emergency protection order for Southern Resident killer whales under section 80 of the Species at Risk Act.

- We are reviewing the petition at this time. Fisheries and Oceans Canada takes protecting our whales seriously and will give this petition due consideration as we consider further actions to protect our vulnerable species.

- The Government of Canada recognizes that it must protect species at risk while also maintaining economic stability and sustainable industries. Every effort is made to work with fishing, shipping, ecotourism, and other industries to meet the objectives of the Species at Risk Act while minimizing its impact on individuals, communities and businesses.

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- Protecting species at risk is a responsibility shared by all Canadians and the federal government is committed to working with provinces and all Canadians in implementing the Species at Risk Act.

- On October 26, 2017, the Minister announced that the Government of Canada will bring forward updates to the Marine Mammal Regulations to provide greater protection for marine mammals.

- The Government of Canada gathered together experts, indigenous groups and interested stakeholders in the summer of 2017 to review the effectiveness of recovery measures for the Southern Resident Killer Whale, including a multi-stakeholder symposium in October with a view to advancing Southern Resident Killer Whale population stabilization and recovery.

- A report on what we heard has been prepared and will be made public very soon.

- Studies of trial slowdowns of vessels passing through Haro Strait have been conducted and the results are being analysed.

- For the 2018 salmon fishing season, the Department is considering additional fishery management actions to increase chinook availability in key Southern Resident Killer Whale foraging areas within their Critical Habitat. Potential measures will be designed to provide an accessible food supply and to reduce physical and acoustic disturbance in key foraging areas. New – approved by Jeff Grout

- Further information on potential measures under consideration will be available in February 2018. Consultations with First Nations and stakeholders to seek input on these potential measures will occur as part of meetings scheduled to discuss the salmon Management Plans. New – approved by Jeff Grout

Responsive

What would the petitioned emergency protection order do, and how would it affect marine traffic:

It is too soon to speculate on what type of order, if any, might be called for. We are reviewing the petition.

On how the petitioned order would affect ferries and domestic vessels:

It is too soon to speculate on what type of order, if any, might be called for. We are reviewing the petition.

On how the petitioned order would affect whale watching vessels:

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It is too soon to speculate on what type of order, if any, might be called for. We are reviewing the petition.

Spokesperson: TBD

Approved by: A/RDG Pac Region, Nick Winfield, Philippe Morel, shared with Sylvie Lapointe and Trevor Swerdfager.

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APPROVED

Media Lines

Unsuccessful birth to Southern Resident Killer Whale J35

Issue:

On July 24, 2018 at 11:40 am, Southern Resident Killer whale J35 was observed off the Victoria waterfront with a calf. Approximately 30 minutes later, personnel from the Center for Whale Research were in attendance and photographed J35 carrying a dead calf on her rostrum. This is a significant loss for the Southern Resident population, whose numbers are dangerously low; there has not been successful birth in the population for three years.

Media lines:

- The loss of any calf to the Southern Resident Killer whale population has a significant impact on population recovery.
- Over the last 6 weeks, DFO scientists have identified 75 individuals from the SRKW population around Southern Vancouver Island. J35's calf was the only calf that has been spotted this year.
- In addition to the loss of J35's calf, the scientific community continues to express concern over the condition of J50, a 3 year old juvenile who appears emaciated.
- DFO scientists are collecting samples to support a comparison of fecal hormones to identify whether SRKW pregnancy loss is significantly higher than what is experienced in the NRKW population. Preliminary data from this field study will likely be available in late 2019.
- The Government of Canada is committed to the protection and recovery of the iconic and, culturally and ecologically significant, Southern Resident Killer Whale.
- The Minister of Fisheries, Oceans, and the Canadian Coast Guard and the Minister of Environment and Climate Change have determined that the Southern Resident Killer Whale is facing imminent threats to its survival and recovery.
- The Government of Canada is committed to protecting these whales, and is taking actions to protect and recover the species. We are weighing all the options to ensure protections are in place as rapidly as possible.
- We have taken and continue to take concrete action to protect Southern Resident Killer Whales, such as:
    - Fisheries and Oceans Canada has introduced new salmon fishery management measures to increase prey availability and reduce disturbance from salmon fishing in three key Southern Resident Killer Whale foraging areas: Strait of Juan de Fuca, Gulf Islands and the mouth of the Fraser River. These measures will

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aim to reduce harvest of key chinook salmon stocks by 25-35% in northern and southern B.C., a key prey species for SRKW. The 25-35% reduction is a coastwide number to address long-term Chinook declines across the region, and is a separate measure not specific to SRKW. The foraging areas are specifically so that the Southern Resident Killer Whale can feed without competition and noise in known preferred areas for feeding.

- Full closures for recreational finfish and commercial salmon fisheries were implemented in the Strait of Juan de Fuca and the Gulf Island. Partial closures were put in effect for the mouth of the Fraser River.

- We have introduced new regulations that prohibit vessels from approaching Southern Resident Killer Whale closer than 200m—this will help minimize noise disturbance and allow the whales to feed more easily.

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Frequently Asked Questions and Answers (FAQ):

2018 BC Chinook and Southern Resident Killer Whale (SRKW) Management Actions

June 29, 2018

1) Why did the Department implement new management measures for Chinook fisheries in 2018?

a) Management measures implemented in 2018 serve two distinct purposes:

- Chinook conservation: Achieve a precautionary 25-35% reduction in fishing mortality on BC Chinook populations of conservation concern including Skeena, Nass, small wild Northern Chinook populations and all Fraser River Chinook management units (i.e. Spring 4_2, Spring 5_2, Summer 5_2, Summer 4_1, and Fall 4_1) to support conservation and promote rebuilding. These measures are in response to very poor returns in 2017 and broad declines in productivity for many Chinook populations across their range. These conservation concerns for BC Chinook populations are documented in a Science Response titled, *Science information to support consultations on BC Chinook Salmon fishery management measures in 2018* that is available at the following link: http://www.dfo-mpo.gc.ca/csas-sccs/Publications/ScR-RS/2018/2018_035-eng.html

- Increased Chinook prey availability for Southern Resident Killer Whales (SRKW): For the 2018 salmon fishing season, the Department is focusing attention on ways to support increased Chinook Salmon prey availability in key foraging areas within the SRKW Critical Habitat. The primary objective of the proposed measures is to improve Chinook Salmon *availability* for SRKW by decreasing potential fishery competition, as well as, minimizing physical and acoustic disturbance in key foraging areas to the extent possible. Chinook *availability* refers to the combination of both the abundance (i.e. amount) of Chinook in local areas and their accessibility to SRKW. *Accessibility* relates to the ease of obtaining prey and can be affected by physical or acoustic disturbance that impacts SRKW foraging success.

2) What are the new management actions in place for 2018?

a) For Chinook:

- Management actions to achieve a 25-35% reduction in fishing mortalities on BC Chinook stocks or concern were announced in FN0428. A copy of the notice is available here: http://notices.dfo-mpo.gc.ca/fns-sap/index-eng.cfm?pg=view_notice&DOC_ID=208486&ID=all

A map showing the management actions implemented in southern BC is included at the end of this document.

b) For SRKW:

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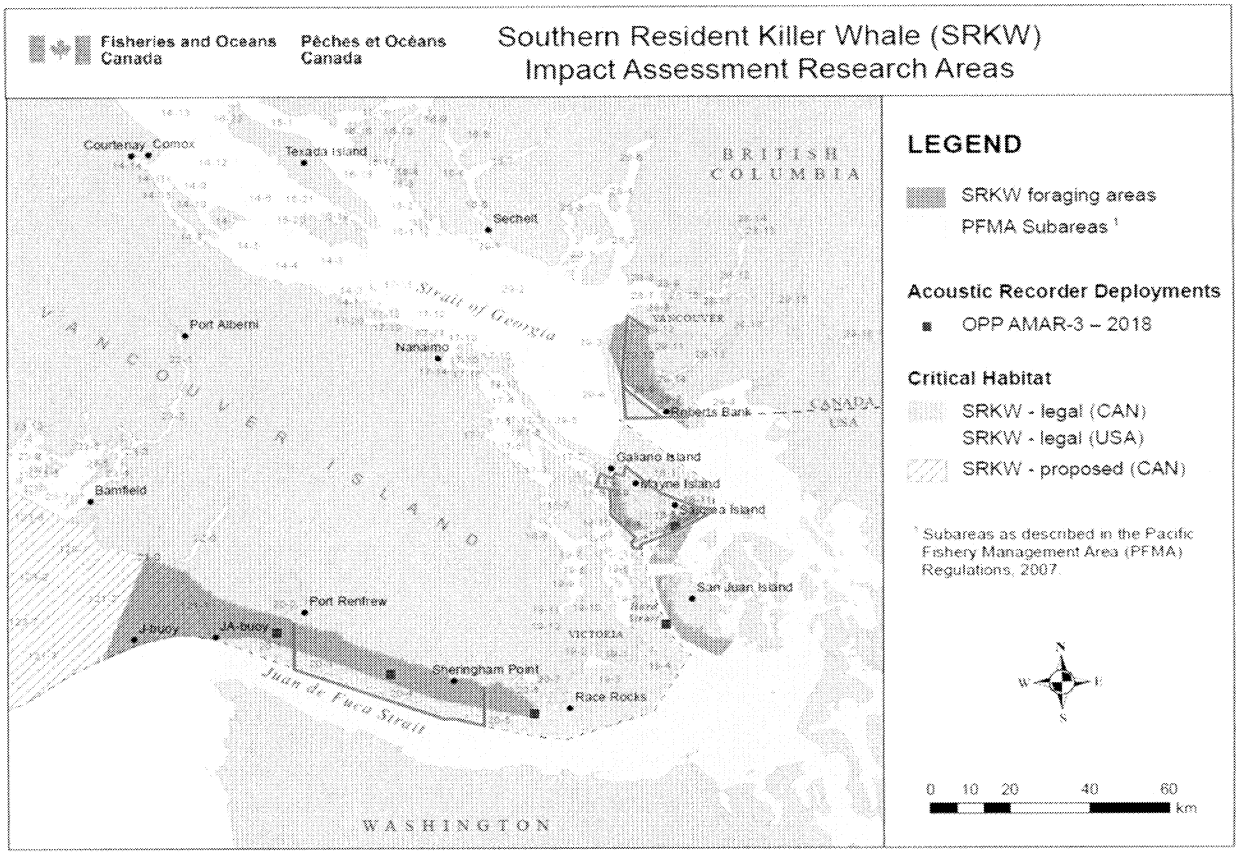
- Recreational finfish and commercial salmon fishing closures are in place to increase Chinook Salmon prey availability for SRKW in the Strait of Juan de Fuca (Sub-Areas 20-3, 20-4, and a portion of 20-5 west of Otter Point), Gulf Islands (Sub-Aareas 18-2, 18-4, 18-5, and 18-9). Salmon fishing closure/Chinook non-retention are in place for the mouth of the Fraser River (Subareas 29-6, 29-7, 29-9, and 29-10). These measures are intended to reduce competition for Chinook Salmon and disruption of SRKW foraging activities associated with the physical presence of vessels (physical disturbance) and acoustic disturbance during the May to September period based on timing of previous SRKW foraging observations. For 2018, the measures will be in place June 1 to September 30.



Maps for each area are also online: http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/salmon-saumon/2018-skrw-ers-eng.html

3) What was the process undertaken to arrive at these management actions?

- The Department consulted with First Nations and stakeholders on measures for SRKW and BC Chinook populations as part of the process to develop the salmon Integrated Fisheries Management Plans (IFMPs). The Sport Fishing Advisory Board represents recreational harvesters in this process.
- To support discussions on SRKW management measures, the Department circulated a discussion paper identifying proposed management actions in SRKW foraging areas and asked for feedback 30 days later. A range of feedback was provided that ranged from less

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restrictive actions (e.g. no fishing for Chinook/salmon vs. finfish closure and reduced areas where actions apply) to more restrictive actions (e.g. much larger closure areas). Advice that was received was summarized and reviewed as part of final consultation meetings and with a multi-sector SRKW committee.

SRKW Discussion Paper Final Feb 15 20

- For BC Chinook, the Department circulated supporting documentation to identify possible actions designed to conserve Skeena Chinook (Northern BC) and Fraser River Chinook (Northern and Southern BC). For Fraser River Chinook, the Department provided a discussion document (March 23, 2018) and EXCEL spreadsheet to facilitate development of possible options to achieve the 25-35% reduction target for these stocks. A similar analysis was done for Skeena Chinook in Northern BC. Advice that was received was summarized and reviewed as part of final consultation meetings.

Fraser chinook conservation measure

4) Why were actions that I invested a lot of time and effort to recommend not taken? (Associated question: If DFO isn't going to use the information I provide, why should I continue to provide it?)

- The Department received a range of advice from First Nations and stakeholders on potential management actions for SRKW and BC Chinook populations.
- The Department appreciates the advice received and uses this information to inform decisions and to assess the potential impacts of alternative management approaches. However, a broad range of feedback was received on the proposed management measures and there was no agreement on a single, preferred management approach. A Ministerial decision was then sought based on options intended to represent the diverse range of views received through consultations.

5) Why do the recreational management actions apply to all finfish? Southern Resident Killer Whales don't eat halibut do they?

- While SRKW primarily target Chinook during foraging activities, recreational finfish closures were considered the most effective way to address both Chinook salmon removals and physical and acoustic disturbance from recreational fishing vessels within the foraging areas. Finfish closures are also intended to support effective compliance and enforcement of the foraging area measures.

6) Why were recreational shellfish regulations not impacted by Chinook fishery management actions?

- Management measures were focused on increasing Chinook prey availability by reducing competition for Chinook and reducing disturbance in SRKW foraging areas. The Department

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consulted on implementing finfish or salmon fishing closures as part of the process to develop the salmon IFMPs.

- However, the Government of Canada has recently announced (June 22, 2018) additional measures to address disturbance of SRKW from underwater noise by:

  (1) Imposing a new mandatory requirement for all marine vessels (including recreational boats) to stay at least 200 metres away from killer whales, effective July 11, 2018;

  (2) Asking vessels to move further away from key foraging grounds within shipping lanes of the Strait of Juan de Fuca, with the help of the U.S. Coast Guard, and partnering with the Vancouver Fraser Port Authority Enhancing Cetacean Habitat and Observation (ECHO) program on a voluntary vessel slowdown in Haro Strait starting in July 2018;

  (3) Working with BC Ferries to develop a noise management plan to reduce underwater noise impacts of its fleet on killer whales; and

  (4) Developing the necessary tools to implement mandatory measures where needed to reduce noise from vessel traffic, such as legislation if required.
- Further details on other measures are also available in the attached files:

Oceans Protection Plan-Southern Resider | Southern Resident Killer Whales_EN.png | News Release-SRKW.pdf

7) Why didn't the recreational management actions include more mark selective fisheries (MSFs)? The enhanced populations I target aren't of conservation concern.

- Mark Selective Fisheries refer to fishery regulations that allow differential retention of adipose fin clipped (i.e. hatchery origin) vs. non-adipose fin clipped (i.e. wild or unmarked hatchery origin) Chinook. Examples include partial MSF where hatchery and wild fish can be retained (e.g. 2 Chinook per day with only hatchery marked greater than 67cm) and full MSF (e.g. 2 Chinook per day hatchery marked only).
- Regarding MSFs, the Department has previously sent a letter to the SFAB identifying concerns that must be addressed to support implementation of new partial or full MSFs. While MSF regulations were not approved for the Strait of Georgia in 2018, the Department intends to inform the Pacific Salmon Commission that if and when the new Pacific Salmon Treaty chapters are agreed-to by the Parties, Canada may consider additional mark selective fisheries for Chinook salmon beginning in 2019 to support implementation of any new Canadian fisheries obligations. The Department is also planning to submit a general proposal indicating our intent to review the possible implementation of new MSFs for Chinook salmon in southern BC with the intent to provide further information regarding specific mark-selective fisheries that may be planned for 2019 (possibly as part of our Fall 2018 submission to the PSC). This will require further analysis and consultation with harvesters beginning in the Fall.

8) Why weren't West Coast of Vancouver Island recreational fishery regulations altered as part of these management actions?

- Management actions in southern BC were designed to result in 25 to 35% reductions in fishery mortalities on all Fraser River Chinook management units. To inform planning, the Department provided coded-wire tag (CWT) fishery mortality tables for Fraser River Chinook

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indicators to assist with fishery planning. Based on this information, it was determined that given already low fishery mortalities (i.e. < 2% mortality on Fraser Chinook indicators) in the WCVI recreational fishery, there would be minimal savings from additional fishery reductions in that area.

9) Why do the management actions affect some sectors more than others? Shouldn't everyone share the reductions equally?

- In considering potential management actions to implement for 2018, proposed measures will need to be consistent with the Salmon Allocation Policy that assigns the highest priority to conservation, followed by First Nation access to Chinook salmon for food, social, ceremonial and Treaty obligations. Consistent with conservation objectives, the expected outcome of fishery reductions is to pass reductions from outside fisheries through to spawning grounds to the extent possible; this requires existing restrictions from recent years to be maintained and consideration of other additional reductions to further reduce impacts.
- Additional reductions to achieve the 25-35% reductions in 2018 were applied primarily to commercial and recreational fisheries consistent with salmon allocation priorities. While First Nations fisheries were not further reduced in 2018, restrictions for First Nations FSC fisheries from previous years have also been maintained to ensure conservation objectives are achieved.

10) What data did DFO use to develop Chinook fishery management actions? Was data from DFO's internet fishing surveys ("iREC" and "iARC") used in arriving at these management actions?

- Data from Chinook CWT indicator populations was used to identify the 25-35% reductions in fishery mortalities required and identify potential fisheries where further actions were required. Design of fishery management measures to achieve target reductions in recreational fisheries also considered other available data sources including creel survey, iREC and other information to support design of specific fishery management actions (e.g. daily limit reduction, minimum and maximum size limits, time and areas for restrictions).

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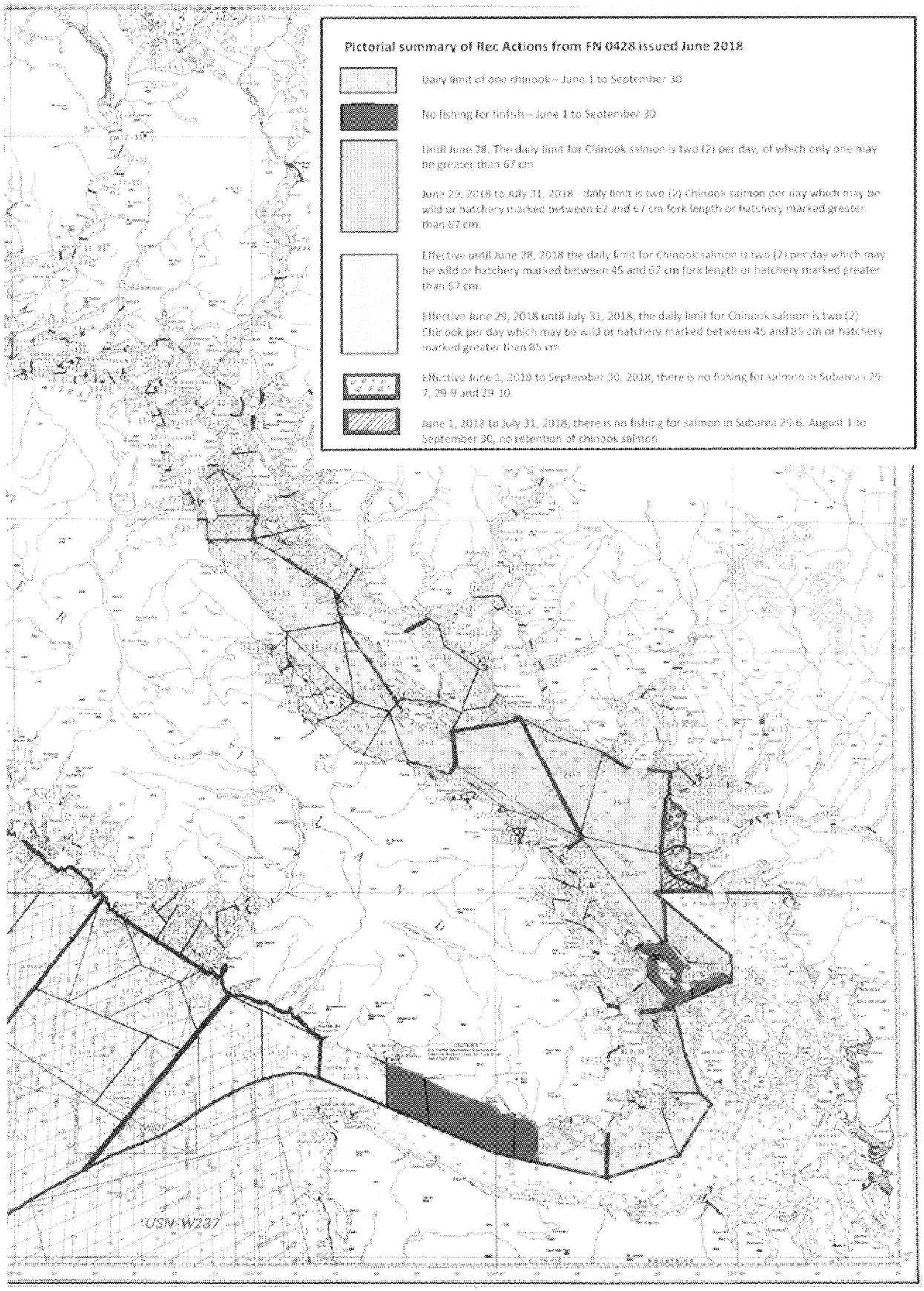

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MEDIA LINES
Amendments to the *Marine Mammal Regulations*

Issue: The Government of Canada is amending the *Marine Mammal Regulations* (MMR) made under the *Fisheries Act* to strengthen rules governing human activities affecting marine mammals, such as whale watching. The amendments were published in the *Canada Gazette, Part II* on July 11, 2018.

Media lines

- Watching whales and other marine mammals in their natural surroundings gives Canadians an opportunity to better appreciate these beautiful animals, but when humans get too close to wildlife in their habitat, we risk disturbing and even harming marine wildlife.

- The Government is bringing forward amendments to the *Marine Mammal Regulations* to provide greater protection for marine mammals including Canada's at-risk whales.

- Marine mammals face a complex mix of threats—such as increased noise levels from passing ships, vessel strikes, gear entanglement and pollution in the water. These threats are particularly challenging for endangered whale populations – notably the Southern Resident killer whale, the North Atlantic right whale and the St. Lawrence Estuary beluga.

- These amendments include measures to reduce disturbance associated with vessel presence, which is a recovery objective for the Southern Resident killer whale, the St. Lawrence Estuary beluga and the North Atlantic right whale.

- The amendments to the *Marine Mammal Regulations* include:
    - Expanding the scope of application of the Regulations to include conservation and protection of marine mammals in Canada and Canadian fisheries waters.
    - Regulating marine mammal watching.
    - Defining "disturb" in the Regulations.
    - Introducing a general minimum approach distance of 100 m for whales, dolphins and porpoises.
    - Providing alternative approach distances that are tailored to particular circumstances, including minimum approach distances of :
        - 200 m for all killer whale populations in B.C. and the Pacific Ocean
        - 200 m for all whales, dolphins and porpoises in the Saguenay-St. Lawrence Marine Park
        - 400 m for threatened or endangered whales, dolphins and porpoises in the St. Lawrence Estuary (the critical habitat of the endangered St. Lawrence Estuary beluga)
        - 50 m in parts of the Churchill Estuary (which includes the Churchill River) and parts of the Seal River
    - Prohibiting flight manoeuvres intended to bring an aircraft closer to a marine mammal or to otherwise disturb it. This would include landings, take-offs and changes in course or altitude.
    - Requiring any accidental contact between a vessel or fishing gear and a marine mammal to be reported.
    - An exception for disturbances that contribute to conserving and protecting marine mammals. This would include helping animals in distress, conducting marine

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scientific research, as well as carrying out activities authorized by licence under section 52 of the *Fishery (General) Regulations* or otherwise authorized under the *Species at Risk Act*.
    - An exception for any work, undertaking or activity authorized under the *Fisheries Act*.

- These amendments are based on past consultations with various industries, the scientific community, and environmental non-governmental organizations. They reflect actions already being taken voluntarily by some commercial boaters involved in marine mammal watching.

- Following the publication of the amendments in the *Canada Gazette, Part I* in March 2012, the Department has carefully considered all comments received includingthe Let's Talk Whales consultation and targeted consultation in 2014-15,

If pressed on the gap between consultations and amendments:
- Fisheries and Oceans Canada is pleased to be in a position to move forward at this time with the changes. Based on continuing dialogue with stakeholders, the Department is confident that the information from formal consultations remains relevant today.

Questions and answers

How do approach distances protect whales, dolphins and porpoises? How are these distances determined?
Maintaining a minimum distance between vessels and marine mammals provides a safety buffer for marine mammals. All approach distances outlined in the regulations were determined using the best available science.

The Department considers a 100 m approach distance to be appropriate for marine mammals in most circumstances without unnecessarily restricting the public from enjoying marine mammal viewing.

The 200 m approach distance for killer whales on the Pacific coast is supported by published studies and evidence that this distance will reduce noise and vessel interference with whale foraging activities.

The *Marine Activities in the Saguenay–St. Lawrence Marine Park Regulations,* already in place within the Saguenay–St. Lawrence Marine Park, require a minimum approach distance of 400 m for endangered or threatened marine mammals such as the beluga whale and the blue whale, as well as 200 m for all whales, dolphins and porpoises in the Saguenay-St. Lawrence Marine Park.

Why are there different approach distances in the Regulations?
There is no single approach distance that is appropriate for all species of marine mammals, vessel classes, seasons, nor for all situations. As a result, these Regulations provide alternative approach distances that are tailored to particular circumstances:

- 200 m for all killer whale populations in B.C. and the Pacific Ocean
- 200 m for all whales, dolphins and porpoises in the Saguenay-St. Lawrence Marine Park
- 400 m for threatened or endangered whales, dolphins and porpoises in the St. Lawrence Estuary (the critical habitat of the endangered St. Lawrence Estuary beluga)
- 50 m in the narrow Churchill River area to allow for safe boating activities

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Does the minimum 200 m approach distance for killer whales only apply to the Southern Resident killer whale?
No. The 200 m approach distance applies to **all** killer whale populations in B.C. and the Pacific Ocean.

Southern Resident killer whales are physically similar to other types of killer whales, as such they are difficult to tell apart. To ensure the best protection for the Southern Resident killer whale, approach distances under the marine mammal regulations have been made to apply all killer whales.

Is there a specific approach distance for North Atlantic right whales as there is in the U.S.?
Based on the scientific advice it has received, the Department considers a 100 m approach distance to be appropriate. This approach distance adds to the speed restrictions and fisheries management measures the Government of Canada introduced in 2017 and 2018 to protect this endangered whale species from further harm. These measures take into account protections in the United States.

What does it mean to "disturb" a marine mammal for the purposes of the Regulations?
The Regulations previously prohibited disturbing marine mammals, but did not define this concept.

The amendments now clearly define what constitutes a disturbance including approaching or attempting to approach a marine mammal. Disturbance includes:

- feeding, swimming or interacting with a marine mammal;
- moving a marine mammal (or enticing/causing it to move);
- separating a marine mammal from its group or going between it and a calf;
- trapping a marine mammal or a group either between a vessel and the shore, or between a vessel and other vessels; or
- tagging or marking a marine mammal.

Do these Regulations apply to all boaters (including ferries, cruise ships and container ships) or just commercial whale-watching operations?

These Regulations apply to all boaters including commercial and recreational boaters.

Vessels that are in transit are exempt from the approach distance requirements in the Regulations. However, vessels that are actively engaged in whale watching or that divert their course to approach or follow a whale would not benefit from this exception.

Will these amendments impact Indigenous rights to harvest marine mammals?
No, the amendments will not have an impact on Indigenous harvesting rights.

What do these changes mean for Churchill and Seal River areas?
Marine mammals are wild animals that people may inadvertently come across while enjoying our oceans. In those cases we ask that you keep your distance, not only for their well-being, but

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for yours as well. The Churchill and Seal River areas in Manitoba are frequented in the summer by large concentrations of beluga whales. Given the geography of these areas, a 50 m minimum approach distance in parts of the Seal and Churchill River estuaries protection for the beluga whales and supports safe boating activities. A general minimum approach distance of 100 m for whales, dolphins and porpoises still applies for all other areas.

Why is DFO bringing forward these changes now?
Voluntary guidelines existed but they were not enforceable. In light of the threats facing mammals, in particular endangered whale populations, it has become clear that we need real, timely and effective action to protect marine mammals from further harm.

How will these changes impact eco-tourism operators?
Responsible viewing of marine mammals provides the opportunity for people across all ages and cultures to become familiar with marine mammals and their critical habitat and to become involved in conservation efforts on a local, regional, national and international level. Tour operators were consulted during previous targeted consultations on the amendments and the majority supported the proposed general minimum approach distance of 100 m for whales, dolphins and porpoises.

Additionally, tour operators on the Pacific coast with a presence in U.S. waters are already familiar with maintaining a 200 yard approach distance for Southern Resident killer whales, as it is a requirement in U.S. waters.

In the St. Lawrence Estuary, tour operators are familiar with the requirement to maintain a minimum distance of 400m from threatened or endangered whales, as the *Marine Activities in the Saguenay–St. Lawrence Marine Park Regulations* are already in place within the Saguenay-St. Lawrence Marine Park.

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Marine mammals are wild animals that people may inadvertently come across while enjoying our oceans. In those cases we ask that you keep your distance, not only for their well-being, but for yours as well.

If pressed: Belugas are plentiful in the Churchill River, how would anyone in the area and in the water keep 50 m of distance?
In those cases when marine mammals are within the 50 metre approach distance we ask that you proceed with caution and keep your distance, not only for their well-being, but for yours as well. The amendments are meant to prevent vessels from approaching marine mammals closer than 50 metres. The rules are not intended to control whether or not belugas or any other marine mammals approach vessels more closely than what is outlined in the regulations.

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Issue	Department	Question	Answer

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Announced Measures	DFO	Clarify the disparity between the *MMR* RIAS stating that there is no increase in enforcement costs and the June 22 announcement committing to increased monitoring and enforcement.	The RIAS states that enforcement costs of the marine mammal regulations are not expected to increase and that additional costs to DFO are likely to be minimal as monitoring of activities is already in place. In addition to the analysis that informed the RIAS, it has also been determined by the Government of Canada that the conservation and protection of marine mammals is a priority for the Department and a decision was taken to invest in additional resources to support this work in Canadian coastal waters. The additional resources, announced on June 22, 2018 as part of the Whales Initiative which builds on the Oceans Protection Plan ("Adding more fishery officers on the water to verify compliance with approach distances and disturbances and harassment provisions of the regulations and enforce fisheries closures" and "increasing aerial surveillance patrols"), will be distributed across Canada and will benefit not only the Southern Resident Killer Whale, but also the North Atlantic Right Whale, and the St. Lawrence Estuary Beluga. They will support enforcement of the Marine Mammal Regulation disturbance prohibitions which protect all marine mammals, and the harassment prohibition under the Species At Risk Act which protects all listed threatened or endangered species.
Announced Measures	DFO	Clarify the meaning of "vessels in transit" The Amended MMR do not include any limitation on these exemptions.	Vessels in transit would be vessels that are passing through, that is, they go from origin to destination without deviating from their course for whale watching purposes. Vessels that are in transit are exempt from the approach requirements in the Regulations. However, vessels that are actively engaged in whale watching or that divert their course to approach or follow a whale would not benefit from this exception.

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Announced Measures	DFO	Will national guidelines, when developed, be adhered to by recreational boaters.	The *Marine Mammal Regulations*, including the requirement to maintain an approach distance of not less than 100 metres from marine mammals generally and 200 m from killer whales in the Pacific, apply to all vessels observing whales, whether commercial or recreational. The national guidelines which complement the Regulations, would apply in the same manner.
Announced Measures	DFO	Are national guidelines to accompany the Amended MMR are being developed (as stated in the RIAS)?	The Department of Fisheries and Oceans is updating its national whale watching and marine mammal viewing guidelines to accompany the amended *Marine Mammal Regulations*.
Announced Measures	DFO (Science)	How will the marine mammal survey benefit the SRKW?	Marine mammal surveys will be used to inform the presence and distribution of killer whales. These data can be used to inform or refine critical habitat and their associated features and attributes. Focal follows are being conducted to assess fishing efficacy and other behaviours while capturing information on the presence and proximity of vessels and their type. While the Pacific Region International Sighting Survey of Marine Mammals (PRISMM) targets most cetaceans species, it will cover the range occupied by SRKW and may contribute to detect individuals as well as co-occurring species, some of which may be at risk.
Announced Measures	DFO, TC, ECCC	How does the Government see the announced measures as addressing the imminent threats?	**Prey availability:** The new measures for 2018 are expected to be a significant mitigation to this threat. These measures include a reduction in the total fishery removals for Chinook salmon of 25-35% which aims to increase prey availability for SRKW. As well, fishery closures for recreational finfish and commercial salmon fisheries in portions of the Strait of Juan de Fuca and portions of the Gulf Islands, and partial closures in the mouth of the Fraser River also aim to protect key foraging areas for SRKW. **Acoustic and physical disturbance:**

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			TC has taken significant action to address underwater ship noise in the SRKW critical habitat. In addition to supporting research and collecting baseline data, TC supported the 2017 voluntary trial slowdown in Haro Strait that dramatically reduced noise levels in the area. This success is being built upon in 2018 with another voluntary slowdown in the same area along with an anticipated lateral displacement in the Strait of Juan de Fuca. TC continues to work with large commercial shippers to push for implementation of adaptive, voluntary measures, while establishing the needed authorities to enable mandatory measures when necessary. [redacted] The Government of Canada is strengthening enforcement of its regulatory controls on contaminants.
Critical Habitat	DFO	When will a CHO be in place? What is the intended timing of the critical habitat order? Is this an expedited process?	Identification and protection of critical habitat requires two components of work: identifying the critical habitat in a SARA recovery strategy, and protection of the identified habitat via Ministerial Order or other means that legally protect the critical habitat. The *Recovery Strategy for Northern and Southern Resident Killer Whale* (Orcinus orca) *in Canada* is undergoing an amendment to identify additional critical habitat for Northern and Southern Resident Killer Whale. The document is anticipated to be finalized toward the end of year. While the SARA does require that critical

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			habitat be protected within 180 days of its identification in a recovery document, we are working to expedite this regulatory process.
Critical Habitat	DFO	Why is boundary box approach being used to identify CH? Won't this reduce the habitat protection from the CHO?	The Department's approach to identification of critical habitat is described in the Directive and Guidelines for Identification of Critical Habitat for Aquatic Species at Risk, is consistent with the approach used by both Environment Canada and Parks Canada, and has been used in identifying critical habitat for aquatic species at risk since 2015. Under this direction, a Bounding Box Approach (BBA) is used to identify critical habitat as specific habitat functions, features, and attributes necessary for survival and recovery of the species, which occur in a defined area. The BBA provides a more descriptive approach, and is used when habitat features and their attributes can be described but their location varies yearly, or knowledge of their specific location does not exist or is not practical to obtain. The approach provides the same measure of protection as is present in the existing SRKW critical habitat order, which was developed prior to this policy direction. In both the existing and proposed critical habitat, it is the habitat functions, features, and attributes within the defined areas which are protected against destruction.
Critical Habitat / Whale Watching	DFO	Is the Government planning on prohibiting commercial and recreational whale watching on SRKW in feeding refuges at relevant times of year?	We intend to engage the whale watching sector to collaborate on how best to protect SRKW in feeding refuges and generally.
Whale Watching	DFO	Why is it only 200 m for all killer whales? Why not 400 m?	The only publication referred to in Ecojustice's letter is one by Holt on Sound exposure that cites another one by Bain et al. 2006 wrt the 400m issue. The later shows non-statistical differences of impact

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			of boat presence at different distances from SRKW (100, 200, 400m) on foraging, resting, and socializing. The only statistical difference found was for whale travelling activities at 100m and 400m. However, the 400m component of the study includes boats from 0 to 400m, so one cannot tease out the impact of boats closer to whales (e.g. 100m) from those further away. If only one of the sites is retained, then there was a significant difference in foraging activities when boats were present from 0 to 400m of the whales.
[redacted]			
Prey Availability	DFO	Will there be additional areas designated as foraging areas, like area 20-1?	DFO will review the closures to inform decisions about the role of these closures over the longer term. DFO is also reviewing data available for other fisheries in key foraging areas for SRKW and whether any further steps are necessary to reduce the threat of prey availability in these areas.

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Prey Availability	DFO	What is planned to rebuild Chinook stocks?	*Management actions for Southern BC Chinook:* Additional fishery management measures are in place for 2018 fisheries to address conservation concerns for many BC Chinook Salmon populations. DFO has implemented a precautionary 25% to 35% reduction in exploitation rates for specific Chinook stocks of concern to support conservation and promote rebuilding. The additional reductions are planned to address conservation concerns for all Fraser River Chinook populations (including Spring 4_2, Spring 5_2, Summer 5_2, Summer 4_1, and Fall 4_1) in Southern BC. In addition, the Department is developing an Integrated Strategic Plan to support the recovery and rebuilding of southern BC chinook salmon populations. *New Provisions under the Pacific Salmon Treaty (still to be ratified):* Canadian and U.S. representatives on the Pacific Salmon Commission (PSC) recently concluded the renegotiation of five chapters of the Pacific Salmon Treaty, including Chapter 3 (Chinook). If approved by both countries, the new chapters would be in place for 10 years, beginning January 1, 2019 (through 2028). Negotiations within the PSC considered the important ecosystem role played by Pacific salmon, particularly Chinook. The PSC has recommended a number of changes to the Chinook chapter, including harvest reductions in Canadian and U.S. (Alaskan) fisheries to address conservation concerns for Chinook stocks in both countries. The proposed changes include up to a 7.5% reduction in harvest for the U.S. Southeast Alaska (SEAK) Chinook fishery, which will support conservation and rebuilding of Canadian and U.S.-origin Chinook and may also improve Chinook availability for SRKW. Under the revised Chapter, Canada would also reduce Chinook harvest in the West

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			Coast of Vancouver Island (WCVI) fishery and in some of the inside (Individual Stock Based Management or ISBM) fisheries. These reductions would align with domestic conservation measures for Chinook identified in the 2018/19 Pacific Salmon IFMP and support increased prey availability.
Noise	TC	When will work on quieting vessels commence? What is the timeline for this process?	Work has already started. Internationally, Canada has raised the issue of underwater noise at the International Maritime Organization (IMO) at the last two meetings of the Marine Environment Protection Committee (MEPC) and will do so again at the next meeting in October. Moreover, Canada is convening a domestic and international workshop to critically examine improvements to ship design and propose prescriptive solutions. Other work includes the current voluntary slowdown in Haro Strait and the planned lateral displacement in the Strait of Juan de Fuca. TC is also partnering with BC Ferries to develop a fleet noise management plan that will lead to reduced underwater noise in the long-term. As well, amendments to the Canada Shipping Act are being drafted that, if passed, will give the Minister of Transport improved ability to regulate shipping for the purpose of environmental protection. Work to quiet vessels began more than a year ago and will continue into the foreseeable future.
Noise	TC	What are the details of the noise management plans initiated by BC Ferries? What are the timelines involved and when will changes be implemented?	As announced in the Whales Initiative, the Government is working with BC Ferries to develop a first Underwater Noise Management Plan to reduce underwater noise impacts of its fleet on killer whales. This work is in the initial stages, with BC Ferries drafting a plan.

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			TC is also working to draft a Discussion Document on the concept of Underwater Noise Management Plans for the broader industry. TC will be engaging with stakeholder on this in the fall.
Noise	TC	When will the lateral displacement voluntary measure begin and why isn't it starting sooner?	The 2018 voluntary lateral displacement in SRKW critical habitat is anticipated to begin in August and last until October 31, 2018. This measure is taking time to implement due to several factors: 1. It is in an internationally recognized shipping lane that is governed by existing rules and international conventions. 2. This area is managed by the US Coast Guard so agreement needs to be reached with them before proceeding. 3. Procedures must be drafted to mitigate risks to navigation and safety. 4. Impacts on fishermen and Indigenous communities needs to be addressed. TC has moved quickly to ensure that this measure can be implemented safely and that all affected communities have been able to participate in the planning and have their concerns addressed as much as possible.
Noise	TC	When will voluntary measures for slowdowns in Haro Strait announced on June 22 commence?	The 2018 voluntary slowdown has started. TC is encouraged by the reported 80% participation rate in its first week. The voluntary slowdown period will remain in effect until at least September 15. This year's noise mitigation measures coupled with the Haro Strait slowdown in 2017 are testaments to the success of voluntary measures.
Noise	TC	Please clarify the relationship between ECHO and the federal government and explain why a non-federal agency is responsible for these measures.	TC is an active member of the ECHO program; we work in partnership, and are well aligned, with the members of the Advisory Working Group to advance research and actions on reducing underwater noise.

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

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			TC has invested $1.3 M over the last 3 years for various ECHO initiatives, which has been utilized to fund the deployment of the world leading near real-time underwater listening station (ULS) in the Strait of Georgia and support the voluntary slowdown trial last summer, along with other important elements of the program directed at reducing underwater noise in the Salish Sea. Partnering with industry and the scientific community is the best mechanism for ensuring the quickest and most effective actions that result in significant impacts.
New Measures	DFO, TC,	What will the Government do about outstanding requested measures?	The Government of Canada is committed to protecting and conserving the SRKW whale by addressing the identified three key threats. The interplay between the threats means individual measures must be viewed holistically. The measures announced in the Whales Initiative address the key threats in a manner that we expect will allow the SRKW population to recover and meet the goals as set in the Recovery Strategy.
New Measures	DFO, TC,	Will the Government mandate that there will be no net increase in overall noise levels relative to 2016 levels?	The Government of Canada is committed to the protection and recovery of the SRKW population by addressing all of the identified key threats. TC's significant work to reduce underwater noise in the critical habitat and its impacts of reflects this commitment.
New Measures	DFO, TC,	Will the Government develop and adopt a set of noise reduction targets that are biologically relevant and	Work is underway to determine the existing acoustic environment in areas of Critical Habitat. This information may be used to inform future acoustic targets.

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		meaningful to the recovery of SRKW?	
ITA	DFO	When will the Imminent Threat Assessment be available to the public?	The ITA should be available on the Species at Risk public registry within the week.

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July 27, 2018

Status of SRKW announced measures

Announcement	Status
National aerial surveillance program (NASP)	TC is working towards purchase of the aircraft this fiscal year with intent to have it ready for next summer.
Creation of a SRKW Indigenous and Multi-stakeholder group	Participants have been invited and inaugural meeting scheduled for July 30, 2018 in Vancouver.
Lateral displacement trial	A meeting with USCG will take place early next week at which time a date for the start of the trial will be agreed upon.
Haro Strait voluntary slowdown	The 2018 voluntary slowdown has started. TC is encouraged by the reported 80% participation rate in its first week. The voluntary slowdown period will remain in effect until at least September 15. • 15 kn or less for vehicle carriers, cruise and container vessels • 12.5 kn or less for bulkers, tankers, Washington State Ferries and government vessels. ECHO has reported that from July 12th - 19th agents have flagged 76 of 88 transits as potential candidates for participating in the slowdown and 70 of those participated, indicating a total vessel participation rate of **80%.**
Noise management plans	As announced in the Whales Initiative, the Government is working with BC Ferries to develop a first Underwater Noise Management Plan to reduce underwater noise impacts of its fleet on killer whales. It is anticipated that a Noise Management Plan for BC Ferries will be available by August 24th for inclusion in materials available for their Annual General Meeting.. TC is also working to draft a Discussion Document on the concept of Underwater Noise Management Plans for the broader industry. TC will be engaging with stakeholder on this in the fall.
Hydrophone deployment	Since February 1st 2018, under the Oceans Protection Plan – MEQ (Marine Environmental Quality) project for whales – DFO has maintained three autonomous listening moorings in: • the Strait of Juan de Fuca (off Sooke, Jordan River and Port Renfrew), • one in Haro Strait (Canadian side) and • one in Boundary Pass. These moorings are sampling continuously at a sampling frequency of 250 kHz, giving each instrument an acoustic bandwidth between approximately 10 and 125,000 Hz. The hydrophones are approximately 2m off the bottom in water depths ranging between 100 and 200 m. A sixth was added

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	(Swiftsure) in April 2018. Recorders are on a recovery/redeployment schedule and moorings are typically serviced over a few days each month. The locations of these hydrophones were chosen based on more than 10 years of effort-corrected sightings data, passive acoustic monitoring, focal follows and survey results, to be critical habitats for SRKW in Juan de Fuca. Recorder locations were selected to correspond with areas of SRKW habitat use that is affected by commercial vessel traffic (i.e., TMX) in order to acquire two years of baseline data prior to increase in TMX vessel transits. TC: Autonomous deployment at Boundary Pass proceeding through ECHO. For long term real time deployment, a Statement of Work is under development, but cannot be put forward until DFO completes the evaluation of suppliers for the supply arrangement.
MMR Amendment	The amended MMRs were published July 11, 2018 and are in force.
Marine mammal response program	MMRP quarterly reports are being collected and a national quarterly report will be created. Capacity building planning is still underway and in progress for 2018-2019.
Chinook Salmon prey availability	Ongoing as announced – closed areas and catch reductions. DFO will review the closures to inform decisions about the role of these closures over the longer term. DFO is also reviewing data available for other fisheries in key foraging areas for SRKW and whether any further steps are necessary to reduce the threat of prey availability in these areas.
Science for killer whale (DFO)	• Marine mammal megafauna survey is underway • $3M Whale Science for Tomorrow joint initiative between DFO and NSERC was announced on July 17th to support enhancement of research on marine mammals in Canada, with a focus on priority endangered whale populations, including SRKW. Call for proposals currently out and deadline to apply is Aug. 10th. Research proposals on whale health (such as effects of contaminants) and condition (in the context of threat identification), effectiveness of threat mitigations, and whale assessment methodologies (including innovative survey technologies) are being solicited. GoC's initiative to protect and support recovery for whales: • $3.3M over five years was announced for DFO-led research into prey availability for three priority endangered whale

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	populations, including SRKW. Planning for this research is currently underway, and will aim to study foraging success of SRKW in known key foraging areas as well as prey availability over time. • $4.4M/5 years will be dedicated to monitoring of contaminants in whales and their main prey • Contamination in SRKW and SLEB tissues accumulates as a result of eating contaminated prey. Contaminants of concern include pesticides, flame retardants, pharmaceuticals and personal care products. This work will focus on quantifying levels of key contaminants in tissues of both whale species and their main prey to document changes in contaminant loading over time, which will help measure the effectiveness in control measures and to support the identification of new priority management measures. The work proposed by DFO will complement science activities by ECCC which will look at sources of contaminants, air/freshwater/saltwater sampling, and pathway to whale preys. • Work is underway to establish a baseline for assessing the effects of Chinook fishery closures/reductions on SRKW in the future.
Science for killer whale (ECCC)	Contract underway for landfill leachate sampling and work underway to identify target contaminants to be addressed through increased fresh water monitoring program.
Whale innovation challenge prize	The contract for initiating the prize is underway.
Emergency Order	Ministers are currently determining whether or not existing measures are providing adequate protection to allow for survival and recovery of the Southern Residents. If imminent threats to the survival or recovery of SRKW are addressed by equivalent measures, a recommendation for an emergency order would be made as quickly as possible.
Critical Habitat	The external review on the draft amended Recovery Strategy incorporating the newly proposed areas as CH has just ended. The proposed version will be posted to the SAR public registry for a 60d public comment period in mid-August. Plans are in progress to establish the CHO by December 2018.
Increasing regulatory controls for contaminants of concern for whales and their prey	ECCC is working on strengthening controls for contaminants of concern to the SRKW including polybrominated diphenyl ethers (PBDEs) and perflurooctane sulfonate (PFOS).
Increased compliance and enforcement	Enhanced surveillance via FASE patrols-30% increase over the SRKW CH closures. Patrols were initiated on July 13th, 2018. Fishery officers will attempt to follow up on most reported violations in SRKW CH closures.

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pages 3378 to / à 3380

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Dozie, Juachi

From: Kristin Wilkinson - NOAA Federal [redacted] >
Sent: August-06-18 9:16 AM
To: Joseph Karl Gaydos; Kenneth Balcomb; Candice Emmons; John Durban; Brad Hanson; Steve Raverty; Dawn Noren; Hendrik Nollens; Mike Ford; Lynne Barre; Deborah Fauquier; Holly Fearnbach; Betsy Lutmerding; Director Marine Mammal; Jim McBain; Teri Rowles; Lance Barrett-Lennard; Thornton, Sheila; Cottrell, Paul; Marty Haulena; Linda Rhodes; Deborah Giles, PhD; Teresa Mongillo; Becker, Penny A (DFW); Jeffries, Steven (DFW); Jenny Atkinson; Russ Mullins
Subject: Re: Consultation Call Notes, 8/2 & Next Steps

Good Morning All -

Description: I apologize for the last minute change in phone number. Please call into 888-283-0166
Passcode: [redacted]

Draft Agenda:
- Update on weekend activities
- Update on prioritization of medical treatment

- Field Responders Meeting - Tuesday on San Juan Island
- Update on Communications activities
- Discuss future calls

All for now,

Kristin

On Thu, Aug 2, 2018 at 12:24 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Hello All,

Thank you for being on the call this morning and for sharing your insight.

Next Steps:
1. John & Holly have extended their time in the San Juans (leaving Monday morning) and will try to obtain overhead video and improved photographs of J50. Holly will be updating the Eye Patch ratio graph.
2. Deborah Giles has a goal of collecting a fecal sample from J50 following the attached protocol, this is also posted on the Google Group.
3. Brad Hanson has a goal of collecting another breath sample from J50 following the attached protocol, this is also posted on the Google Group.
4. Arrangements will be made for a veterinary health assessment to be done of J50. Shiela Thorton has offered for Dr. Marty Haulena to go out on their DFO vessel. Brad Hanson has offered his vessel as a platform as well for this assessment to be done. I'll share the draft health assessment form with Marty that Joe and Hendrik have been working on.
5. A follow-up call to discuss supplementation will be scheduled as soon as possible following some additional conversations this morning. A description of the action and a proposed idea will need to be submitted to Dr. Teri Rowles and NOAA HQ for permit review.
6. You will receive a Google Group invite from me shortly. This can be a centralized place where data, photos, video, etc. can be shared in a controlled setting. We will all agree anything placed in the folder will not be shared outside of this group. You can also access the folder by clicking:
https://drive.google.com/drive/folders/1Gg5Whty6QvPFPYJEUps2PtvTXgRDT5eq?usp=sharing

Thanks again, I look forward to our next call.

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--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

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Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
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Dozie, Juachi

From: Girouard, Louise
Sent: August-06-18 4:43 PM
To: Cottrell, Paul; Davies, Leri
Cc: Bate, Dan
Subject: Re: CTV - J50 Monday

Thanks Paul.
No worries. Appreciate the update. NOAA (Michael) did give them an interview via skype this afternoon.

L

From: Cottrell, Paul
Sent: Monday, August 6, 2018 4:38 PM
To: Girouard, Louise; Davies, Leri
Cc: Bate, Dan
Subject: Re: CTV - J50 Monday

Hi Guys,
[redacted] I'm on the water tomorrow and can update [redacted] then if she is interested. J pod was not observed today so nothing to report. There was a reported killer whale strike in Johnston Strait and a possible dead killer whale in Nootka Sound I am following up with. Hope to have more details soon.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Girouard, Louise
Sent: Monday, August 6, 2018 1:10 PM
To: Cottrell, Paul; Davies, Leri
Cc: Bate, Dan
Subject: Fw: CTV - J50 Monday

Good afternoon Paul,

Sorry to bother you on this beautiful day.

Please request from CTV [redacted] for an interview today and some photographs of J50.

I am not sure if you are available today. A reply in writing would also be satisfactory.

L
[redacted]

Reporter, CTV Vancouver

Cell [redacted]

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From: Imbeau, Michelle <Michelle.Imbeau@dfo-mpo.gc.ca>
Sent: Monday, August 6, 2018 11:57 AM
To: [redacted] RHQ - Media.PAC
Subject: Re: CTV - J50 Monday

From: [redacted]
Sent: Monday, August 6, 2018 11:27 AM
To: Imbeau, Michelle
Subject: CTV - J50 Monday

Hi Michelle,

I'm working on a J50 update today. We have heard from officials in the U.S – but I am really hoping to get someone from DFO on camera today to speak about their involvement in this effort.

Do you know if anyone is in today that may be able to Skype or clip?

If Paul is on one of the boats can he take any photos or video for us?

Please let me know.
Thanks –

[redacted]

Reporter, CTV Vancouver

Cell: [redacted]

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Dozie, Juachi

From: Kristin Wilkinson - NOAA Federal <[redacted]>
Sent: August-06-18 5:27 PM
To: Joseph Karl Gaydos; Kenneth Balcomb; Candice Emmons; John Durban; Brad Hanson; Steve Raverty; Dawn Noren; Hendrik Nollens; Mike Ford; Lynne Barre; Deborah Fauquier; Holly Fearnbach; Betsy Lutmerding; Director Marine Mammal; Jim McBain; Teri Rowles; Lance Barrett-Lennard; Thornton, Sheila; Cottrell, Paul; Marty Haulena; Linda Rhodes; Deborah Giles, PhD; Teresa Mongillo; Becker, Penny A (DFW); Jeffries, Steven (DFW); Jenny Atkinson; Russ Mullins; Lambourn, Dyanna (DFW)
Subject: Consultation Call Notes, 8/6 & Priorities

Hi Everyone -

Thank you to those of you who were able to join the consultation call this morning. I heard from some of you that you were unable to join, I apologize for any technical difficulties you may have experienced.

We do have some updates on prioritization of field response activities;
1. Sample Collection - breath and fecal
2. Health Assessment & Injection of a long lasting antibiotic via pole syringe if possible, if not, remote delivery via Dan Inject. Dr. Marty Haulena and Dr. Jim McBain are on standby for Monday and Dr. Hendrik Nollens on Tuesday. The antibiotic treatment would not be available until Tuesday.
3. Providing temporary nutritional support therapy to J50 in coordination with The Whale Sanctuary Project, the Lummi Tribe and NWFSC. The Lummi Tribe will be doing a dry run on Monday and will be ready to transport live fish on Tuesday. They would have ~ 12 fish per day. John Gussman will provide UAS services to document the process and whale behavior. Discussions will continue on oral medication treatment. This is still pending permit authorization.

Dr. Hendrik Nollens flew from San Diego to Friday Harbor today and is poised to conduct a health assessment on J50 and provide an injection of antibiotics to her if given the opportunity tomorrow. Sarah Wilkin, our National Stranding Coordinator also flew to Seattle and Sarah and I will be traveling to the San Juans early tomorrow morning to meet with the core team to discuss logistics and operations for the coming week. We will be on the island coordinating with the team on Tuesday and Wednesday.

Communications provided an update from their team about the website, public input, social media (1 post per day), partner engagement, and the daily press call at 10 am.

The Communications Team shared the below links with me, please feel free to share them as you see fit.

http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/updates-j50-j35.html

Linked from the homepage under What's New: http://www.westcoast.fisheries.noaa.gov/index.html
Linked from J50 news story: http://www.westcoast.fisheries.noaa.gov/stories/2018/08032018_srkw_j50.html
Short url: http://bit.ly/NOAAJ50J35

There is also an email address that the public can use to email us their input and ideas, Killerwhale.help@noaa.gov

Please feel free to contact me if you have any questions or concerns about the above information.

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office

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[redacted] Cell

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Dozie, Juachi

From: [redacted]
Sent: August-06-18 10:54 AM
To: Cottrell, Paul
Subject: CTV - J50

Paul,
I'm working on an updated story about J50 today. Are you on one of the boats right now? Or would it be possible to get DFO on camera at all today?
Thanks –

[redacted]

[redacted]
Reporter, CTV Vancouver
Cell: [redacted]

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s.19(1)

Khanna, Sukriti

From: Cottrell, Paul
Sent: August-06-18 6:43 AM
To: Thomson, Andrew; Davis, Neil
Subject: FW: Daily Debrief for Sunday, August 5th

Hi Andy,
Here is NOAA's summary of the call last night. There is lots of fog in the Strait of Juan de Fuca where J, k and L pods are believed to be right now so there will likely be no interactions today. There is a NOAA call today at 9:30 where there will likely be further updates on NOAA activities. I'll keep you posted.
Cheers,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Kristin Wilkinson - NOAA Federal [redacted]
Sent: Sunday, August 05, 2018 10:14 PM
To: Katy Foster; Brad Hanson (NOAA Federal); Holly Fearnbach; [redacted] John Durban - NOAA Federal; Marty Haulena; Deborah Giles; jeff foster; Joseph Karl Gaydos; [redacted] Jim McBain
Cc: Lynne Barre - NOAA Federal; Teri Rowles; Deborah Fauquier; Barry Thom - NOAA Federal; Mike Ford; Ruth Howell; Mark Strom - NOAA Federal; Kevin Werner - NOAA Federal; Director Marine Mammal; Sarah Mesnick; Scott Rumsey - NOAA Federal; Cottrell, Paul; Forbes Darby - NOAA Federal; Chris Yates - NOAA Federal; Thornton, Sheila; Michael Milstein - NOAA Federal; Jim Milbury - NOAA Federal; Becker, Penny A (DFW); John Ewald - NOAA Federal; Jennie Lyons; Kate Naughten; Katherine Brogan - NOAA Affiliate; Samantha Guidon - NOAA Federal; Emma Htun - NOAA Federal; Jennifer Ise - NOAA Federal; Amilee Wilson - NOAA Federal
Subject: Daily Debrief for Sunday, August 5th

Hi Everyone -

Thank you to those of you who were able to join us tonight for the Sunday debrief call. I apologize that I had to ask some of you to sign off since we were at capacity and some of the field response team was unable to sign in.

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DFO reported seeing L's and K's west of Port Renfrew but J pod was not sighted today. Heavy fog has been present which has limited sightings of the whales.

We do have some updates on prioritization of field response activities;
1. Sample Collection - breath and fecal
2. Health Assessment & Injection of a long lasting antibiotic via pole syringe if possible, if not, remote delivery via Dan Inject. Dr. Marty Haulena and Dr. Jim McBain are on standby for Monday and Dr. Hendrik Nollens on Tuesday. The antibiotic treatment would not be available until Tuesday.
3. Providing temporary nutritional support therapy to J50 in coordination with The Whale Sanctuary Project, the Lummi Tribe and NWFSC. The Lummi Tribe will be doing a dry run on Monday and will be ready to transport live fish on Tuesday. They would have ~ 12 fish per day. John Gussman will provide UAS services to document the process and whale behavior. Discussions will continue on oral medication treatment.

Communications provided an update from their team about the website, public input, social media (1 post per day), partner engagement, and the daily press call at 10am.

I'll be hosting our consultation team call tomorrow morning from 9:30-11 and will likely head up to the San Juans on Monday night or early Tuesday morning to meet with the team in person.

All for now,

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

On Sat, Aug 4, 2018 at 10:13 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Good Evening Everyone -

Thank you to those of you who were able to join us tonight for the Saturday debrief call.

While J50 was not sighted today we can confirm that J pod is headed inland and was last sighted eastbound near Jordan River and Sooke around 7pm. They will likely come into the San Juan area tonight so we are very hopeful we will accomplish on Sunday the below goals;

1. Fecal sample collection from J50 - Deborah Giles, University of Washington
2. Breath sample collection from J50 - Hanson, NWFSC
3. Sample collection of skin if needed, areas of discoloration have been noted - Giles or Hanson
4. Veterinary medical assessment on J50 - Haulena, Vancouver Aquarium (Dr. Haulena will be on Brad Hanson's vessel)
5. Additional imagery and video of J50 by UAS - Durban and Fernbach, SWFSC and SR3 Images of the flukes and overall skin appearance is of interest to the veterinarians as well as respiration rate.
6. After the veterinary health assessment is complete a veterinarian call will be hosted by NOAA Fisheries - timing to be determined. This will be a small group of veterinarians to discuss the best treatment for J50's condition.

The NOAA Communications and External Affairs team provided a very valuable overview of their plans to communicate with the public and with the media. I'll let Ruth and Forbes outline their plan in a separate email. Any media inquires can be directed to the Communications

s.19(1)

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Team, [redacted] or via cell at [redacted] Michael did reach out to the news directors in the Seattle area requesting they be mindful of the on-water activities so we can make the most of our time with J50 and the other SRKW's.

Many of you have asked for permission to view the Google Drive, here is a direct link and I will also follow up with an invite. We have all agreed that images will not be shared outside of the group. https://drive.google.com/drive/folders/1Gg5Whty6QvPFPYJEUps2PtvTXgRDT5eq?usp=sharing

We will plan to talk again tomorrow night, Sunday, August 5th at 9pm. Please call into 503-326-7672.

A huge thank you to everyone involved!

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

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Khanna, Sukriti

From: Jones, Lisa Ann
Sent: August-06-18 7:33 PM
To: Nener, Jennifer; Davis, Neil
Subject: response letters sent out Friday Aug. 3: external review of draft Amended Recovery Strategy for RKW
Attachments: Attach 5B - Lem (WCA).doc

Hi both,

Just wanted to let you know that we have sent out the Department letters in response to those received during the external review process for the draft Amended Recovery Strategy for RKW.

We had about 15 letters requiring a more fulsome response. For most letters we included a paragraph for further clarification of the difference between the 2018 IFMP Salmon fishery closures for SRKW and the identification of the proposed new critical habitat areas.

The general concerns raised were around the expedited consultation timeline not allowing for meaningful consultation; the misconception that the designated CH would result in immediate fishing closures on the Swiftsure and La Pérouse Banks; and the validity of the science used to inform the identification of the proposed CH, as many stakeholders could not reconcile the findings of SAR 2017/011 with their personal experiences on the water, especially on La Pérouse Bank.

We sent out 9 letters on Friday:

1) Pacheedaht First Nation
2) Ditidaht First Nation
3) 'Namgis
4) Vancouver Fraser Port Authority
5) Chamber of Shipping
6) SFAB – letter was addressed to Minister
7) West Coast Aquatic and associated groups – letter was addressed to Minister
8) BC Chamber of Commerce – letter was addressed to Minister (cc to BC Premier)
9) Port Renfrew Chamber of Commerce – letter was addressed to Minister (cc to BC Premier)

We have a few other letters that are still being developed – Ecojustice, Maa-nulth and Mayor of Ucluelet. There are also 3 other letters sent to the Minister that SAR Pacific Region is not leading on: BC Premier, MP Gord Johns and MP Alistair MacGregor.

I have attached one of the response letters that was sent out to West Coast Aquatic as an example.

If you have any questions/concerns please let me know.

Cheers
Lisa

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca

s.19(1)

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Fisheries and Oceans Canada

Pêches et Océans Canada

Pacific Region
Suite 200 - 401 Burrard Street
Vancouver, British Columbia
V6C 3S4

Région du Pacifique
Pièce 200 - 401 rue Burrard
Vancouver (C.-B.)
V6C 3S4

Your file

Our file *Notre référence*
2018-505-00065

[redacted] West Coast Aquatic

Dear [redacted]

I am responding to your letter on behalf of the Honourable Dominic LeBlanc, in his previous role as Minister of Fisheries, Oceans and the Canadian Coast Guard. Thank you for your correspondence of July 11, 2018 in response to Fisheries and Oceans Canada (DFO) and the Parks Canada Agency (PCA) external review process on section 7 (critical habitat) of the draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada*. We also thank you and the other representatives for taking the time to partake in the conference call on July 10, 2018 to provide clarification on this process.

We recognize that the timing of the external review process for this document (from June 12 to July 11, 2018) coincided with a busy time of year for the West Coast Aquatic Governance Board and other groups on the West Coast of Vancouver Island. The imminent threat of extinction faced by Southern Resident Killer Whales (SRKW)[1] led to the decision to not delay the external review, and we very much appreciate your understanding in this regard. As you note in your letter, there will be additional opportunity to provide input on the proposed Amended Recovery Strategy when it is posted to the Species at Risk Registry for a 60-day online public comment period, anticipated to begin in late August 2018. You will be notified via email in advance of this period.

We would like to take this opportunity to provide clarification on concerns raised during the external review, especially regarding potential for socio-economic impacts of management measures within critical habitat. No management measures are currently under consideration for the areas within which the proposed critical habitat occurs. Under the *Species at Risk Act* it is the destruction of critical habitat caused by human activities which is prohibited and not the activities themselves. If and when management measures for Resident Killer Whale (RKW) recovery are considered in any location, DFO will engage Indigenous groups and stakeholders through existing processes and mechanisms, and/or through other means as required.

The identification of proposed critical habitat in the draft Amended Recovery Strategy does not directly relate to DFO's 2018 fishery management measures[2] put in place in key SRKW foraging

.../2

[1] https://www.canada.ca/en/fisheries-oceans/news/2018/05/government-of-canada-takes-action-to-protect-southern-resident-killer-whales.html
[2] http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/salmon-saumon/2018-skrw-ers-eng.html

Canada

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areas to support increased prey availability and reduce disturbance from fishing vessels, although there is spatial overlap between these closures and existing SRKW critical habitat. There are no immediate plans to add new closures or to change the 2018 fisheries closures that protect the key foraging areas as described in the 2018 Southern Pacific Salmon Integrated Fisheries Management Plan and the Department will be reviewing its fishery closure approach with Indigenous groups and stakeholders as part of the regular post-season review process.

With respect to your concerns over critical habitat identification off southwest Vancouver Island (SWVI), the identification of these proposed areas is based on science advice stemming from research carried out over the last 40 years[3]. Critical habitat is defined based both on geographical boundaries and on the presence of the biophysical features, functions and attributes within the areas required for the survival or recovery of the species and it is identified following a precautionary, risk-based approach. The availability of preferred prey (Chinook Salmon) is a key feature of critical habitat for Resident Killer Whales (RKW). Along with multi-year visual and acoustic surveys documenting the use of the SWVI area by RKW, Swiftsure and La Pérouse Banks are also identified as highly productive salmon habitat, thus meeting this requirement for critical habitat identification.

The proposed and existing critical habitat areas represent only partial critical habitat. Ongoing research, including boat-based surveys, acoustic data collection, and predation studies, will continue to assess existing areas designated as critical habitat, and support any future identification of additional important habitat areas. As new information (including local and Indigenous knowledge) identifying or clarifying critical habitat becomes available through peer-review processes, further amendments to the recovery strategy will be undertaken as appropriate. For the current amendment, all feedback received during the external review process and 60-day public comment period will be considered and the document revised as appropriate.

Thank you again for your letter. We welcome the opportunity to work alongside your group to understand how we can be effective in our approaches to protect and recover Resident Killer Whales.

Sincerely,

Cheryl Webb
Regional Director
Ecosystems Management Branch
Pacific Region

cc: [redacted] West Coast Aquatic Governance Board
[redacted] West Coast Fishing Guide Association
[redacted] Alberni Sport Fishing Advisory Committee
[redacted] West Coast (Area G) Trollers Association
[redacted] BC Commercial Fishing Caucus

[3] http://www.dfo-mpo.gc.ca/csas-sccs/Publications/ResDocs-DocRech/2017/2017_035-eng.html

s.21(1)(a)
s.21(1)(b)
s.23

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Mbarushimana, Jenny

From: McMillan, Christie
Sent: August-07-18 1:04 PM
To: Brekke, Heather
Subject: RE: Edits to the RKW aRS - for review by COB today or noon tomorrow
Attachments: Suggested edits_RKW aRS for review_CM.docx

Hi Heather,

[redacted]

Thanks!
Christie

From: Brekke, Heather
Sent: August-07-18 12:24 PM
To: McMillan, Christie
Cc: Davis, Neil; Busby, Corina
Subject: Edits to the RKW aRS - for review by COB today or noon tomorrow

Hi Christie,

[redacted]

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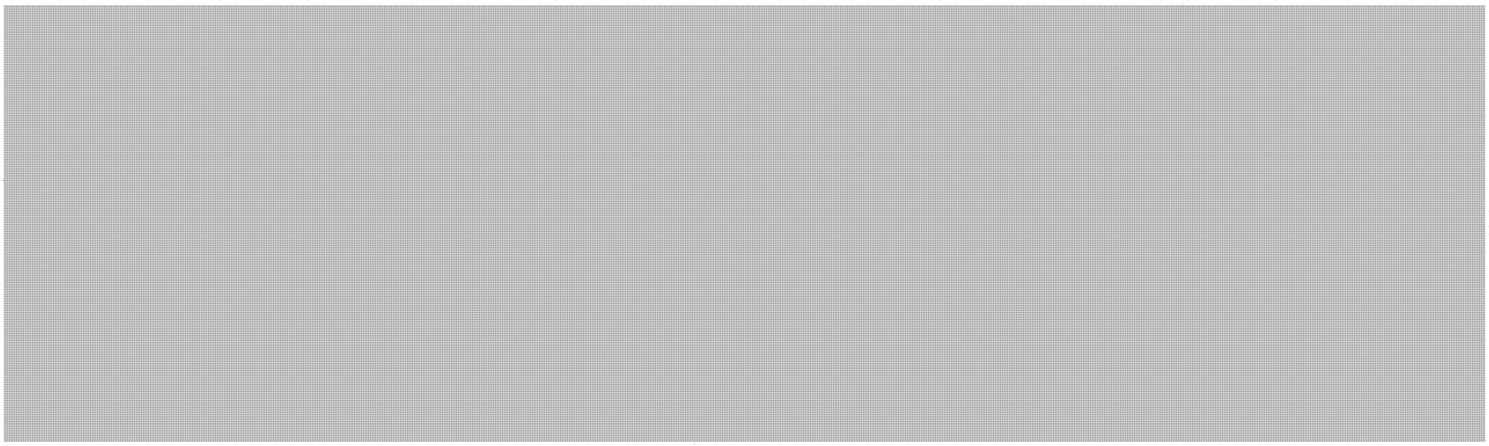

Thanks! Much appreciated,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

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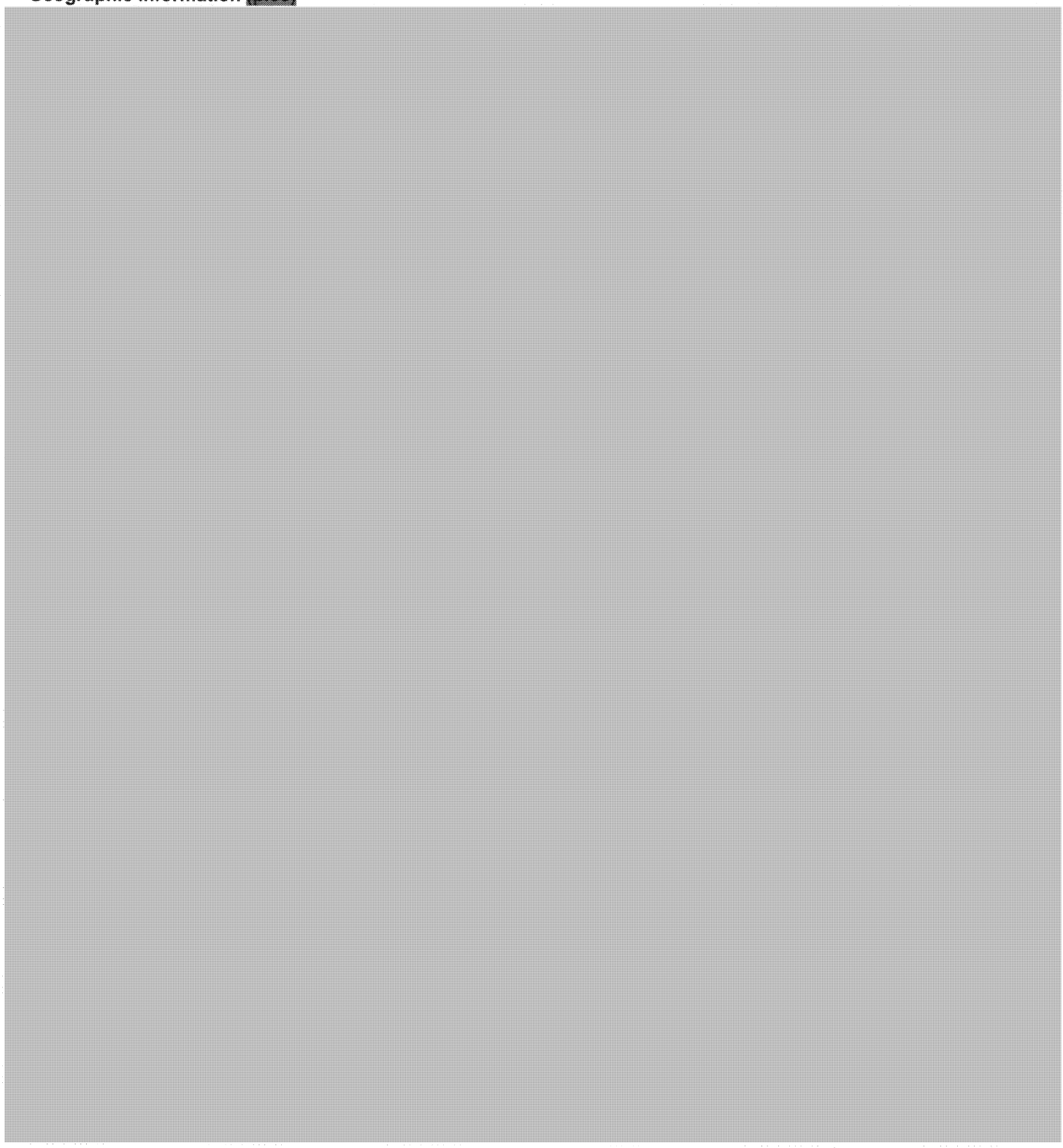
s.21(1)(a)

s.21(1)(b)

s.23

Geographic information (p. 58)



s.21(1)(a)

s.21(1)(b)

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Mbarushimana, Jenny

From: Shaikh, Sharlene
Sent: August-07-18 9:13 AM
To: Jones, Lisa Ann; Brekke, Heather
Cc: McMillan, Christie
Subject: RE: DND and DFO/SARA connect - DND RKW RS Amendment 2018 Comments

Hi team,

[redacted]

Might be something that could form part of your discussion at your meeting in Sept.

Cheers,
Sharlene

From: Jones, Lisa Ann
Sent: August-03-18 1:35 PM
To: Brekke, Heather
Cc: Shaikh, Sharlene; McMillan, Christie
Subject: RE: DND and DFO/SARA connect - DND RKW RS Amendment 2018 Comments

Hi Heather,

Please find below the drafted reply back to Mike and Duane.

Replies to their specific concerns are in red text below. However, I have provided it in table format attached to this email as well in case you would like to send the reply this way

Cheers
Lisa
==========
Hi Mike,

Hope your summer is going well.

It was really good to be able to talk with you and Duane and to receive the comments from DND on the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada.

The external review period was held from June 12-July 11th. From the feedback received during this period, a minor change was made to the document to provide clarification. This was a change in text in Table 4 and Table 6 to change from:

- "Anthropogenic noise level that does not impede effective acoustic social signaling and echolocation to locate prey.", to
- "Anthropogenic noise level that does not interfere with life functions and is sufficient for effective acoustic social signaling and echolocation to locate prey."

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The next step will be a 60-day online public comment period on the Species at Risk Public Registry anticipated to begin in late August.

I have provided a response to your questions below in red text. Please let me know if you have any further questions.

I look forward to our next meeting and our continued collaboration.

Cheers,

Heather

From: Michael.Waters@forces.gc.ca [mailto:Michael.Waters@forces.gc.ca]
Sent: July-09-18 3:42 PM
To: Brekke, Heather
Cc: Jones, Lisa Ann; Duane.Freeman@forces.gc.ca; Tracy.Cornforth@forces.gc.ca
Subject: RE: DND and DFO/SARA connect - DND RKW RS Amendment 2018 Comments
Importance: High

Hi Heather,

Great to talk with you and the Marine Team the other week. Here are DND's comments (and questions) on the RKW Recovery Strategy Amendment:

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Looking forward to our meeting in Sept.

Cheers,

Mike

Mike Waters, BSc, RPBio
Environment Officer | Agent de l'environnement
Formation Safety and Environment | Sécurité et Environnement de la Formation
Canadian Forces Base Esquimalt | Base des Forces Canadiennes Esquimalt
National Defence | Défense Nationale
Building 199D Room 302 | Bâtiment 199D Pièce 302
Victoria, BC V9A 7N2

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michael.waters@forces.gc.ca
Telephone : [redacted]
Cell : [redacted]
Facsimile : 250-363-2567

From: Brekke, Heather [mailto:Heather.Brekke@dfo-mpo.gc.ca]
Sent: June-18-18 3:47 PM
To: Waters MR@FSE@Esquimalt <Michael.Waters@forces.gc.ca>
Cc: Jones, Lisa Ann <LisaAnn.Jones@dfo-mpo.gc.ca>
Subject: DND and DFO/SARA connect

Hi Mike,

Great to see you at ECHO last week. As discussed, I had talked to Duane Freeman last October at the whale symposium and followed up via email about setting up a meeting to discuss DND activities and marine mammal recovery efforts. DND should have also received a letter via email last week regarding the current review of the critical habitat section of a draft SARA Amended Recovery Strategy for RKW, which has a closing date for comments of July 11.

Please let me know if you would like to set up a meeting (in person or via phone) to chat further, and/or if you require further information about the Recovery Strategy amendment to incorporate the new information on critical habitat.

Thanks
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009
Cell: [redacted]

s.21(1)(a)
s.21(1)(b)
s.23

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Khanna, Sukriti

From: Brekke, Heather
Sent: August-07-18 5:17 PM
To: Busby, Corina; Davis, Neil; Payne, Brigid
Cc: Stewart, Julie; Leslie, Karen; Webb, Cheryl
Subject:

Attachments:

Hi Corina, Neil, and Brigid (A/for Cheryl),

Thank you,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

From: Leslie, Karen
Sent: August-01-18 4:54 PM
To: Busby, Corina; Webb, Cheryl; Stewart, Julie; Brekke, Heather
Subject: Fw:

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Shaikh, Sharlene
Sent: Wednesday, August 1, 2018 2:31 PM
To: Jones, Lisa Ann
Cc: Leslie, Karen
Subject: RE:

Hi Lisa,

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[redacted]

Hope this helps,
Sharlene

From: Jones, Lisa Ann
Sent: August-01-18 12:56 PM
To: Shaikh, Sharlene
Cc: Leslie, Karen
Subject: RE: [redacted]

Hi Sharlene,

[redacted]

Cheers
Lisa

From: Ross, Peter [mailto:Peter.Ross@justice.gc.ca]
Sent: August-01-18 12:41 PM
To: Jones, Lisa Ann
Cc: Legault, Josee (DOJ); Shaikh, Sharlene; Leslie, Karen; Brekke, Heather
Subject [redacted]

Lisa:

[redacted]

If you have any questions or concerns, please let us know. Thanks,

Peter

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s.16(2)
s.19(1)
s.21(1)(a)
s.21(1)(b)

Khanna, Sukriti

From: Cottrell, Paul
Sent: August-07-18 7:24 AM
To: Thomson, Andrew; Davis, Neil
Subject: NOAA and J50 Activities/Media
Attachments: Communications Plan for Emergency Response to J50.pdf; Communications Plan for Emergency Response to J50.docx

Hi Andy/Neil,

[redacted] I wanted to give you an update that Jpod has not been seen in in-shore waters for several days so there has been no interaction with NOAA folks. K and L pods have been off Vancouver Island in Canadian waters in the fog. The fog is thick off Vancouver Island again today. So there is unlikely to be an sightings of Jpod. I really look forward to getting a detailed project proposal with methods from NOAA on their proposed intervention activities so we can properly evaluate the risks and rewards from their proposed activities. J50's body condition from photogrametry research indicates her body condition in compromised. The underlying cause and if there are any pathogens involved are unknown at this time. Breath sample cultures have come back negative. I'm on the water today and will be in the Sooke area working with Strait watch and will update you if anything changes. There is a call this morning at 11 between NOAA/DFO regarding media activities and better coordinating things. Our DFO media folks will be on call. Call-in : 1-877-413-4781 Conf ID: [redacted] f you would like to participate. I'll be joining in.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Michael Milstein - NOAA Federal [redacted]
Sent: Monday, August 6, 2018 10:57 PM
To: Cottrell, Paul
Cc: Sloan, Lara; Ruth Howell - NOAA Federal; Malikian, Janine; Girouard, Louise; Bate, Dan; Jim Milbury
Subject: Re: ok to include Vancouver Aquarium?

Yes, Paul, we will do better. Frankly it has taken us a few days to get our own act in order.

I agree that we should have been thinking about you earlier. I will commit to you that will change.

I am attaching our communications plan as it now stands, as we have been fine-tuning it even today. I am attaching in both PDF and Word format, so that you can insert comments or edits in the Word version if you have time.

I think you and Lara know this, but please all of you should know that you can call or email if there is anything we can answer or clarify at any point. It is important that we be consistent and coordinated. I would much rather you contact us at any hour instead of remaining unclear or uncertain about what we are doing.

Best,
Michael

On Mon, Aug 6, 2018 at 10:35 PM, Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca> wrote:

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Hi Michael,
For tomorrow, let's have a DFO/NOAA call. Federal Government to Federal Government. There will be lots of opportunity for further calls with others. I must say the communications at the start of this operation from NOAA to DFO was not very good, you provided the plan Friday afternoon to DFO (ie Sheila and myself) after you had already done a media release. Hopefully we can do better going forward.
Thanks,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Michael Milstein - NOAA Federal
Sent: Monday, August 6, 2018 10:01 PM
To: Cottrell, Paul; Sloan, Lara
Cc: Ruth Howell - NOAA Federal
Subject: ok to include Vancouver Aquarium?

Hi Paul and Lara,

I will defer to you on this, but I think it would be helpful to include Deana Lancaster of the Vancouver Aquarium on our call at 11 am Tuesday. As you know they are participating in the response and I think they would benefit from hearing our discussion, especially in terms of communications. I have shared our Communications plan with Deana, and am including it here as well.

Let me know if you are ok with that, and I will then invite Deana.

Look forward to talking to you Tuesday.

Best
Michael

p.s. I am including Ruth Howell, [redacted] communications manager for NOAA Fisheries on the West Coast. She of course has not had much to do for these first few days, so perhaps we can liven it up for her.

--
Michael Milstein
Public Affairs Officer
NOAA Fisheries
West Coast Region, *Northwest Fisheries Science Center*, *Southwest Fisheries Science Center*
Office: 503-231-6268
Cell: [redacted]
[redacted]

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www.nmfs.noaa.gov

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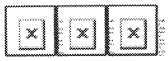
s.19(1)



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Michael Milstein
Public Affairs Officer
NOAA Fisheries
West Coast Region, Northwest Fisheries Science Center, Southwest Fisheries Science Center
Office: 503-231-6268
Cell: [redacted]

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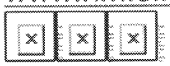
www.nmfs.noaa.gov



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J50 Crisis Communications Plan
Date: August 5, 2018

Background & Purpose:
Biologists and whale stranding experts are mobilizing to respond to an emaciated and ailing young killer whale of the endangered Southern Resident population, J50 (also known as Scarlet). Response options under consideration range from no intervention to feeding her live chinook salmon and treating her with antibiotics delivered in the fish. This population has been in the public eye locally and internationally and any news generates a high level of interest and concern. This plan is designed to coordinate information flow and review internally, and external updates to interested parties while response activities are underway. Our goal is to provide consistent and timely updates and minimize demand on the response team.

Daily Information Flow
Note: These are the daily check in meetings and do not preclude rapid response to breaking issues. We intend to post/release an update at least once a day.

9PM PDT	Response Team Daily Debrief (written summary distributed by Wilkinson)
	10PM PDT If Breaking News: WCR Communications Team sends out cleared "holding statement" based on Wilkinson statement for the Hill, Tribes, Media (WCR Clearance, sent to Guidon, Htun, Wilson, Milstein). Broad distribution. Note: Any breaking news during the day WCR will give a 1 hour notice to HQ before distributing to media.
(next day)	
AM EDT	(as needed) Notifications to NOAA Fisheries Leadership (Htun, Guidon)
AM EDT	(as needed) Congressional Notification as needed (Guidon, Lizama?)
AM PDT	(as needed) Tribal Notification (Wilson)
8:30AM PDT	NOAA Fisheries + Partners Communications Daily Tag Up (Howell)
10AM PDT	Daily Media Call (Hosted by NOAA/Milbury/Barre, other SMEs as needed)
5PM PDT	Day-End Communications Check-In (SHORT) (WCR Comms Team, HQ team optional but welcome as needed)

NOAA Communications Team Members - Participants in 8:30am daily call.
Note: as we reach out to response effort partners, we may add their names

Name	Title & Organization	Roles/Responsibility	Contact Info
Ruth Howell	WCR Branch Chief for Communications and External Affairs	Team Lead	Cell: [redacted] Work: TBD
Forbes Darby	NWFSC Communications Program Manager	Team Co-Lead	Cell: [redacted] Work: 206-302-2474

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Sarah Mesnick	SWFSC Science Liaison	SWFSC Liaison, Strategic advice, general support as needed	Work: 858-546-7148 Cell:
Kate Naughten	NOAA Fisheries Communications Director	HQ Liaison, provide HQ support as needed	Cell: Work: 301-427-8057
Michael Milstein	WCR Public Affairs	Media Lead	Cell: Work: 503-231-6268
Jim Milbury	WCR Public Affairs	Constituent affairs, video and graphics, clips monitoring, media backup	Work: 562-980-4006 Cell:
Amilee Wilson	WCR Tribal Liaison	Tribal Lead	Work: 360-753-5820
Jennifer Ise	WCR Clearance	Clearance, Website updates	Work: 562-980-4046
John Ewald	NOAA Fisheries Public Affairs, Director	Support media efforts, Monitor social media, rumor and sentiment monitoring	cell 240-429-6127
Jennie Lyons	NOAA Fisheries Public Affairs	Support media efforts, Monitor social media, rumor and sentiment monitoring	cell 202-603-9372
Kate Brogan	NOAA Fisheries Public Affairs	Support media efforts, Monitor social media, rumor and sentiment monitoring	cell 202-603-9651
Teri Rowles	NOAA Fisheries Office of Protected Resources	Response Team Liaison	Work: 301-427-8448
Samantha Guidon	NOAA Fisheries Congressional Affairs	Congressional and HQ notification	Work: 301-427-8022 Cell:
Emma Htun	NOAA Fisheries Advisor for Regulatory Programs	HQ notification	Work: 301-427-8070
Lynne Barre	WCR Protected Species Seattle Branch Chief	Subject Matter Expert	Work: 206-526-4745 Cell:
Jenna Swartz	NOAA Fisheries Social Media	National Social media as needed	Cell:
Matt Ellis	NOAA Fisheries Website	National website and social media support as needed	Work: 301-427-8044
Heather Wright, Paul Hillman, Deanna Morris	NOAA Fisheries Video team	Video Support	Wright: 703-867-5569

Invited but optional: Scott Rumsey, Nicolle Hill

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Communications Daily Tag Up Purpose & Agenda

- Debrief from response team re: accomplishments
- Hone daily messages
- Determine day's communications strategies
- Review previous day's effort
- Share inquiries and reactions from public and partners

Response Partners Communications Contacts

Organization	Name	Title & Role	Contact Info
University of Washington	Deborah Giles	Researcher, fecal sample collection	916-531-1516
	Sam Wasser	PI, researcher, fecal	
	Michelle Ma	Assistant News Director	206-543-2580
Vancouver Aquarium	Martin Haulena Jim McBain	Veterinary Medical Assessment	
	Deana Lancaster	Communications Manager	office: 604 659 3752 cell:
SR3	Holly Fearnbach	Photogrammetry	
Department of Fisheries and Oceans	Lara Sloan	DFO Communications Advisor	Office: 250.363.3749 Mobile: Lara.Sloan@dfo-mpo.gc.ca
	Paul Cottrell	DFO Marine Mammal Coordinator	604-240-3841
	John Ford	Killer whale biologist	250-667-4698
	Stephen Raverty	Pathologist and expert on diseases in	778-839-6916

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		killer whales	
Lummi Nation	Kurt Russo Back up POC: Tony Hillaire	Lummi Treaty Protection Task Force Lummi Indian Business Counsel, Chief of Staff	
Governor Inslee office/WDFW	WDFW Enforcement	JT Austin Tara	
Sea World	Taylor Claytor		
Whale Museum's Soundwatch Program	Taylor Shedd		

Media POCs:

See media plan here

Jim Milbury (Primary)
Michael Milstein (Backup)
John Ewald/Jennie Lyons/Kate Brogan (Backups; HQ/OPR liaisons if needed)
Maggie Mooney-Seus (Backup)

Subject Matter Experts

Lynne Barre, Primary Spokesperson, SRKW recovery plan and efforts. Management and conservation efforts, response activities: 206-526-4745;

Brad Hanson, SRKW research program, biology, life history, research on limiting factors: 206-860-3220;

John Durban, Photogrammetry, Life history and population dynamics of killer whales: 858-334-2866;

Mike Ford, General SRKW research program, genetics: 206-860-5612;

Teri Rowles, Veterinary consultations/coordination, Health and Stranding program, permit requirements: 301-427-8448;

Sarah Wilkin, stranding program, permit requirements, response activities: 301-427-8470;

Linda Rhodes, microbiology and detecting microbes in biological samples (breath, biopsy, etc): 206-860-3279;

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Order of Notification

1. Regional and National Fisheries and NOAA Leadership
2. Congressional/Tribal
3. Stakeholders/Partners
4. Public/Media

NOAA Clearance and Notification Process (Social Media posts, talking points, webstories, etc)

Note: WCR has been designated the lead entity. All communications are to be treated like a mini-rollout with WCR Clearance and short suspense HQ, Congressional, & tribal notification.

- Controversial/Breaking News
    - WCR Clearance (SME (Wilkinson), Branch Chief (Barre), ARA (Yates), Ise, Hill/Rumsey)
    - In rapid succession:
        - HQ/Hill notification: Ise sends to Sam G (cc: Emma and Kate)
        - Tribal notification: Wilson sends to tribes (cc: Heather Sagar and Linda Belton?)
- Non-controversial/Previously Cleared information
    - WCR Clearance
- Note: all finalized and approved communications will be stored in the J50 Google Drive (i.e. talking points, daily updates, press releases, etc)

Planned Products Under Development

- Dedicated WCR website for updates & documents (Ise, Peters --complete)
- Email for ideas and suggestions from the public (Killerwhale.help@noaa.gov)
- Photo and Video Footage (Freelancer John Gussman) (Milstein)
- Regular social media posts (Milstein/Milbury, Swartz, Ellis)
- Flickr and Broll for still and video footage (Milbury, Wright)
- Holding statement for J50 disappearance (Milstein, Milbury)
- Media Clips (Milbury)
- FAQs on Feeding and Treatment

Products and Tactics for Future Consideration

- Interactive Forum on San Juan Islands (TBD; possibly partners)
- Op-Eds or Leadership Statements (As Needed)

Key Messages and Talking Points (As of 8/4/18)

1. **Our scientists, with other experts, are on the water right now assessing the health of J50, the juvenile female Southern Resident killer whale known as Scarlet that has been seen in poor condition.**

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a. Sightings indicate that J50 is emaciated and is sometimes lethargic in the water, but still has periods of activity, including feeding. Analysis of a small sample of her breath did not definitively indicate an infection or illness, although it does not rule one out either.
b. The steps we are taking to understand and treat J50 require a scientifically sound approach. We must approach this carefully and deliberately so that if we decide to feed her, we avoid creating a dependence on supplied food.
c. To inform development of additional emergency response and medical treatment plans, scientists will;
    i. Continue with coordinated observations and documentation of behavior and condition (using vessel and Unmanned Aerial Systems, or UAS).
    ii. Conduct a veterinary health assessment.
    iii. Collect additional diagnostic samples (e.g., fecal, breath, exudate or skin patch) if possible over the next several days.
d. These efforts are being conducted by experts authorized under NOAA Fisheries Marine Mammal Health and Stranding Response Program permit and coordinated between U.S. and Canada.

2. **Over the weekend (Aug 4-5), these experts – including the top veterinarians and whale biologists from both the U.S. and Canada – will be evaluating short-term response options to help this whale that has grown weaker over time. These options range from doing nothing to getting food and medicine to the emaciated whale.**
    a. Operations to assist J50 could begin as soon as this Monday (Aug 6).
    b. We ask boaters and aircraft to avoid the area where researchers are operating and follow all regulations and air traffic restrictions.
    c. A plan to assess the possibility of emergency medical treatment is in development for evaluation by NOAA Fisheries under our Marine Mammal Health and Stranding Response Program permit.
    d. Details of the plan are pending and risks to J50 and other Southern Residents will be evaluated and minimized to the extent possible prior to authorization.

3. **We share the public's concern over the condition of the Southern Residents, and in particular, J50. While difficult, this is also opportunity for researchers to more closely study and understand the root cause of J50's condition in hope of preventing or treating other whales in the future.**

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a. NOAA Fisheries and partners are also monitoring the situation with J35, also known as Tahlequah, who has been carrying her dead calf for over a week.
b. We all feel the loss of another calf, and our scientists continue to monitor her and encourage efforts to reduce vessel disturbance around her.
c. An emergency response for J35 has not yet been evaluated or initiated.

4. **We're also continuing our longer-term efforts to address the three main threats to these whales: having enough salmon to eat, vessel traffic and underwater noise, and marine pollution.**
   a. Refer to the Species in the Spotlight 5-year action plan.

5. **Working with partners in other federal agencies, academia, and the private sector, we've developed advanced unobtrusive scientific methods to learn about the lives of these killer whales, monitor their status, and understand threats to their population.**
   a. The techniques include: photogrammetry, tagging, genetic analysis of scat, and breath sampling for microbes.

6. **We have more information about efforts to recover the Southern Residents on our website. Also, we will provide progress updates on our Facebook page. In the meantime, we ask for the public's cooperation in steering clear of the immediate area while research and emergency response activities are taking place.**

Key High-level Messages:

- Southern Resident killer whales are a highly endangered, specialized population of killer whales that now number 75, the lowest in decades. Female whales are especially valuable to the population given their reproductive potential.
- Safety is paramount. The first priority of all operations remains the safety of responders and the whales.
- We are drawing on the knowledge and expertise of the world's top experts to develop and implement the response plan, and will consistently reevaluate the benefits of intervention against the risk of disturbance to the J-pod as a whole.
- Biologists recognize that most killer whales that have deteriorated to the extent of J50 do not recover. Attempting intervention has rarely if ever been attempted before. Doing so is an experimental approach, with uncertain chances of success.
- While we are now focused on short-term support for J50, we continue to work with partners across the region to advance plans for the long-term recovery of

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Southern Resident killer whales. Everyone on the West Coast has a role in protecting the whales.

Background:

- J-50 history: Born in late December 2014. Mother, J16. Drone photogrammetry studies by Durban (NOAA/SWFSC), Fearnbach (SR3) and Barrett-Lennard (Vancouver Aquarium) have documented J-50's small size for her age since her first year of life, and notably poorer body condition in 2017. More recently, Center for Whale Research observed further declining body condition from boat observations starting in January 2018 culminating in the current conspicuous depression behind the blowhole "peanut head". Activity level and association with mom and pod has varied.

- Consultation call 7/26: Gaydos/SeaDoc Society held a call of researchers and vets to discuss history and current condition of J50 based on field observations and sampling. Activity level and association with mom and pod has continued to vary in recent observations. No obvious skin condition. Recent odor from breath smelled by Giles/UW. Fecal samples collected by Hanson/NWFSC and Giles/UW from whale groups with J50 and frozen, but have not been analyzed or identified as J50 samples. Video and breath sample collected by Hanson/NWFSC 7/21, no breath odor detected, analysis pending. Vessel activity near J50 reduced by proactive efforts by Pacific Whale Watch Association, Soundwatch, Enforcement and coordinated in US and Canadian waters. Next steps- continued photo, video and behavior monitoring, UAS photogrammetry field visit planned starting 8/1. Vets will develop sampling protocol for cytology/culture samples from breath and feces.

- Consultation calls 8/2: NOAA hosted a call to review updates. Photos from UAS (Durban/SWFSC, Fearnbach/SR3) collected on 8/1 show J50 in very poor condition (similar to the measured condition of her cousin J52 before he disappeared in 2017) and show white patch behind the blowhole and it is unknown if on skin or exudate from blowhole. UAS observations of J50 close with J16, J50 near J26 chasing fish at surface, and J50 defecation. Lagging behavior may be increasing, and in general whale displays an unusual labored ("ploughing") action when surfacing, but periods of activity also observed by UAS and from boat observations (US and Canada). Additional information to be collected- UAS will continue including photogrammetry measurements of condition, photo documentation of skin condition and respiration rates. Breath sample and confirmed collection a fecal sample from J50 for PCR analysis if

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possible. A veterinary health assessment was identified as a priority and NOAA has provided authorization for several vets.

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J50 Crisis Communications Plan
Date: August 5, 2018

Background & Purpose:
Biologists and whale stranding experts are mobilizing to respond to an emaciated and ailing young killer whale of the endangered Southern Resident population, J50 (also known as Scarlet). Response options under consideration range from no intervention to feeding her live chinook salmon and treating her with antibiotics delivered in the fish. This population has been in the public eye locally and internationally and any news generates a high level of interest and concern. This plan is designed to coordinate information flow and review internally, and external updates to interested parties while response activities are underway. Our goal is to provide consistent and timely updates and minimize demand on the response team.

Daily Information Flow
Note: These are the daily check in meetings and do not preclude rapid response to breaking issues. We intend to post/release an update at least once a day.

9PM PDT	Response Team Daily Debrief (written summary distributed by Wilkinson)
10PM PDT	If Breaking News: WCR Communications Team sends out cleared "holding statement" based on Wilkinson statement for the Hill, Tribes, Media (WCR Clearance, sent to Guidon, Htun, Wilson, Milstein). Broad distribution. Note: Any breaking news during the day WCR will give a 1 hour notice to HQ before distributing to media.
(next day)	
AM EDT	(as needed) Notifications to NOAA Fisheries Leadership (Htun, Guidon)
AM EDT	(as needed) Congressional Notification as needed (Guidon, Lizama?)
AM PDT	(as needed) Tribal Notification (Wilson)
8:30AM PDT	NOAA Fisheries + Partners Communications Daily Tag Up (Howell)
10AM PDT	Daily Media Call (Hosted by NOAA/Milbury/Barre, other SMEs as needed)
5PM PDT	Day-End Communications Check-In (SHORT) (WCR Comms Team, HQ team optional but welcome as needed)

NOAA Communications Team Members - Participants in 8:30am daily call.
Note: as we reach out to response effort partners, we may add their names

Name	Title & Organization	Roles/Responsibility	Contact Info
Ruth Howell	WCR Branch Chief for Communications and External Affairs	Team Lead	Cell: [redacted] Work: TBD
Forbes Darby	NWFSC Communications	Team Co-Lead	Cell: [redacted]

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	Program Manager		Work: 206-302-2474
Sarah Mesnick	SWFSC Science Liaison	SWFSC Liaison, Strategic advice, general support as needed	Work: 858-546-7148 Cell:
Kate Naughten	NOAA Fisheries Communications Director	HQ Liaison, provide HQ support as needed	Cell: Work: 301-427-8057
Michael Milstein	WCR Public Affairs	Media Lead	Cell: Work: 503-231-6268
Jim Milbury	WCR Public Affairs	Constituent affairs, video and graphics, clips monitoring, media backup	Work: 562-980-4006 Cell:
Amilee Wilson	WCR Tribal Liaison	Tribal Lead	Work: 360-753-5820
Jennifer Ise	WCR Clearance	Clearance, Website updates	Work: 562-980-4046
John Ewald	NOAA Fisheries Public Affairs, Director	Support media efforts, Monitor social media, rumor and sentiment monitoring	301-427-8029; cell
Jennie Lyons	NOAA Fisheries Public Affairs	Support media efforts, Monitor social media, rumor and sentiment monitoring	301-427-8013; cell
Kate Brogan	NOAA Fisheries Public Affairs	Support media efforts, Monitor social media, rumor and sentiment monitoring	301-427-8030; cell
Teri Rowles	NOAA Fisheries Office of Protected Resources	Response Team Liaison	Work: 301-427-8448
Samantha Guidon	NOAA Fisheries Congressional Affairs	Congressional and HQ notification	Work: 301-427-8022 Cell:
Emma Htun	NOAA Fisheries Advisor for Regulatory Programs	HQ notification	Work: 301-427-8070
Lynne Barre	WCR Protected Species Seattle Branch Chief	Subject Matter Expert	Work: 206-526-4745 Cell
Jenna Swartz	NOAA Fisheries Social Media	National Social media as needed	Cell:
Matt Ellis	NOAA Fisheries Website	National website and social media support as needed	Work: 301-427-8044
Heather Wright, Paul Hillman,	NOAA Fisheries Video team	Video Support	Wright: 703-867-5569

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s.16(2)

s.19(1)

Deanna Morris			

Invited but optional: Scott Rumsey, Nicolle Hill

Communications Daily Tag Up Purpose & Agenda

- Debrief from response team re: accomplishments
- Hone daily messages
- Determine day's communications strategies
- Review previous day's effort
- Share inquiries and reactions from public and partners

Response Partners Communications Contacts

Organization	Name	Title & Role	Contact Info
University of Washington	Deborah Giles Sam Wasser Michelle Ma	Researcher, fecal sample collection PI, researcher, fecal Assistant News Director	[redacted] [redacted] [redacted]
Vancouver Aquarium	Martin Haulena Jim McBain Deana Lancaster	Veterinary Medical Assessment Communications Manager	[redacted] [redacted] office: 604 659 3752 cell: [redacted]
SR3	Holly Fearnbach	Photogrammetry	[redacted]
Department of Fisheries and Oceans	Lara Sloan	DFO Communications Advisor	Office: 250.363.3749 Mobile: [redacted] Lara.Sloan@dfo-mpo.gc.ca

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	Paul Cottrell John Ford Stephen Raverty	DFO Marine Mammal Coordinator Killer whale biologist Pathologist and expert on diseases in killer whales	604-240-3841 250-667-4698 778-839-6916
Lummi Nation	Kurt Russo Back up POC: Tony Hillaire	Lummi Treaty Protection Task Force Lummi Indian Business Counsel, Chief of Staff	[redacted] [redacted] 360-312-2100 (office) [redacted]ell)
Governor Inslee office/WDFW	WDFW Enforcement	JT Austin Tara	
Sea World	Taylor Claytor		[redacted] [redacted]cell) 407.226.5257 (office)
Whale Museum's Soundwatch Program	Taylor Shedd		[redacted]

Media POCs:

See media plan here

Jim Milbury (Primary)
Michael Milstein (Backup)
John Ewald/Jennie Lyons/Kate Brogan (Backups; HQ/OPR liaisons if needed)
Maggie Mooney-Seus (Backup)

Subject Matter Experts

Lynne Barre, Primary Spokesperson, SRKW recovery plan and efforts. Management and conservation efforts, response activities: 206-526-4745; [redacted]
Brad Hanson, SRKW research program, biology, life history, research on limiting factors: 206-860-3220; [redacted]
John Durban, Photogrammetry, Life history and population dynamics of killer whales: 858-334-2866; [redacted]
Mike Ford, General SRKW research program, genetics: 206-860-5612; [redacted]

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Teri Rowles, Veterinary consultations/coordination, Health and Stranding program, permit requirements: 301-427-8448; [redacted]
Sarah Wilkin, stranding program, permit requirements, response activities: 301-427-8470; [redacted]
Linda Rhodes, microbiology and detecting microbes in biological samples (breath, biopsy, etc): 206-860-3279; [redacted]

Order of Notification

1. Regional and National Fisheries and NOAA Leadership
2. Congressional/Tribal
3. Stakeholders/Partners
4. Public/Media

NOAA Clearance and Notification Process (Social Media posts, talking points, webstories, etc)
Note: WCR has been designated the lead entity. All communications are to be treated like a mini-rollout with WCR Clearance and short suspense HQ, Congressional, & tribal notification.

- Controversial/Breaking News
  - WCR Clearance (SME (Wilkinson), Branch Chief (Barre), ARA (Yates), Ise, Hill/Rumsey)
  - In rapid succession:
    - HQ/Hill notification: Ise sends to Sam G (cc: Emma and Kate)
    - Tribal notification: Wilson sends to tribes (cc: Heather Sagar and Linda Belton?)
- Non-controversial/Previously Cleared information
  - WCR Clearance
- Note: all finalized and approved communications will be stored in the J50 Google Drive (i.e. talking points, daily updates, press releases, etc)

Planned Products Under Development

- Dedicated WCR website for updates & documents (Ise, Peters --complete)
- Email for ideas and suggestions from the public (Killerwhale.help@noaa.gov)
- Photo and Video Footage (Freelancer John Gussman) (Milstein)
- Regular social media posts (Milstein/Milbury, Swartz, Ellis)
- Flickr and Broll for still and video footage (Milbury, Wright)
- Holding statement for J50 disappearance (Milstein, Milbury)
- Media Clips (Milbury)
- FAQs on Feeding and Treatment

Products and Tactics for Future Consideration

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Khanna, Sukriti

From: Kennedy, Eddy
Sent: August-07-18 5:15 PM
To: Harber, Lee; Davis, Neil; Lowe, Carmel; Cottrell, Paul; MacDougall, Lesley; Thornton, Sheila
Subject: RE: J50 and Tab 10
Attachments: Tab 10_SRKW-J50 SJT.docx

Hi Lee,
Sorry for my delay in responding with comments. Attached are some comments from Sheila. Also, some additional comments are:

At this point in time, the only diagnosis for J50 is emaciation; thus there is a risk that plans are being developed to "treat" an animal for what is in effect an untreatable condition (environmental degradation resulting in malnutrition). Prophylactic administration of antibiotics is NOAA's current plan, but it should be noted that this is precautionary and should be expressed as such; these treatment options are not going to treat the root cause of her condition. If J50 is diagnosed with an infection, the question is whether it is secondary to her underlying condition, or whether she is actually exhibiting a disease state that has led to her declining body condition.

[redacted]

From: Harber, Lee
Sent: August-07-18 1:40 PM
To: Kennedy, Eddy; Davis, Neil; Lowe, Carmel; Cottrell, Paul; MacDougall, Lesley
Subject: RE: J50 and Tab 10

Hi everyone,

Please find attached an updated draft for your collective reviews. I will then send into approvals.

thanks
lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Kennedy, Eddy
Sent: 2018–August-07 11:38 AM
To: Harber, Lee; Cottrell, Paul
Cc: Lowe, Carmel; MacDougall, Lesley
Subject: RE: J50 and Tab 10

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That's what I am using

From: Harber, Lee
Sent: August-07-18 11:37 AM
To: Kennedy, Eddy; Cottrell, Paul
Cc: Lowe, Carmel; MacDougall, Lesley
Subject: RE: J50 and Tab 10

Hi Eddy, apparently Paul and Sheila have the latest – please see attached.

Paul, would you be able to provide a few bullets for the Tab 10?

Thanks
lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Kennedy, Eddy
Sent: 2018–August-07 11:26 AM
To: Harber, Lee
Cc: Lowe, Carmel; MacDougall, Lesley
Subject: RE: J50 and Tab 10

Working on it

From: Harber, Lee
Sent: August-07-18 11:25 AM
To: Kennedy, Eddy
Cc: Lowe, Carmel; MacDougall, Lesley
Subject: RE: J50 and Tab 10

Hi Eddy, for sure I can pull this together. Is science able to provide a few bullets for me to work into a response?

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Kennedy, Eddy
Sent: 2018–August-07 11:20 AM
To: Harber, Lee
Cc: Lowe, Carmel; MacDougall, Lesley
Subject: FW: J50 and Tab 10

Hi Lee,
I am passing along Carmel's request that the Tab 10 submission should come from FM. Are you able to prepare the submission today?
Let me know if you have questions

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Eddy

Eddy Kennedy
Manager, Ecosystem Sciences Division | Gestionnaire, Division des sciences écosystème
Pacific Biological Station | Station de biologie du Pacifique
Fisheries and Oceans Canada | Pêches et Océans Canada
Tel/Tél: 250-756-3360
Cell: [redacted]
E-Mail: eddy.kennedy@dfo-mpo.gc.ca

From: Lowe, Carmel
Sent: August-07-18 10:29 AM
To: Kennedy, Eddy
Cc: MacDougall, Lesley
Subject: Fw: J50 and Tab 10

Eddy - welcome back!

Carmel

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Nadeau, Simon <Simon.Nadeau@dfo-mpo.gc.ca>
Sent: Tuesday, August 7, 2018 10:20
To: Lowe, Carmel; Laverdure, Louise; Landry, Jean
Subject: J50 and Tab 10

Hi Carmel

Will the region be producing something for Tab 10 today on this?

Let us know.

Simon

From: Hodgins, Jill
Sent: August-07-18 11:28 AM
To: McCallum, Barry; Vézina, Alain; Bliss, Doug; de Lafontaine, Yves; Wang, Sen; Lowe, Carmel; Béchard, Geneviève; Laverdure, Louise; Moore, Wayne; Foster, Sophie; Kristmanson, James
Cc: Armstrong, Carolyn; Asselin, Andréanne; Tudorache, Cristina; Berube, Linda; Dickie, Catherine; Jobes, James; Keough, Brittany; LeBlanc, Denise; Nagy, Aimee J; Lauzon-Legault, Janie; Thompson, Susan; Curtis, Kathryn
Subject: FW: Tab 10 - Upcoming Issues and Decisions (Look Ahead Planning Binder)

Bonjour/Hello

Tab 10. Only include items that require Ministerial action, are of strategic interest, or that are likely to attract significant public attention within the next 2 weeks. Do not use the tab as a means of briefing the Minister. **Include key dates within the next two weeks under Next Steps for Ministerial consideration or action**, e.g. Ministerial decision, event, briefing memo to MINO, etc. Key dates will be added to the WAG as an "Upcoming Issues" row. **See updated guidelines in separate document.**

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De : McPherson, Arran
Envoyé : 7 août 2018 09:50
À : Lowe, Carmel; Laverdure, Louise; Landry, Jean; Nadeau, Simon
Objet : RE: J50

Thanks.

From: Lowe, Carmel
Sent: Sunday, August 5, 2018 1:00 PM
To: McPherson, Arran <Arran.McPherson@dfo-mpo.gc.ca>; Laverdure, Louise <Louise.Laverdure@dfo-mpo.gc.ca>; Landry, Jean <Jean.Landry@dfo-mpo.gc.ca>
Subject: Fw: J50

A heads up on this emerging issue..... [redacted] There is a call scheduled to discuss on Tuesday that I will participate in...

Carmel

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Sunday, August 5, 2018 09:13
To: Thornton, Sheila; Lowe, Carmel; MacConnachie, Sean; Kennedy, Eddy
Cc: Davis, Neil; Thomson, Andrew
Subject: RE: J50

Thanks Sheila,
I share your concern and think a risk assessment of the proposed actions along with an objective look at what we know and don't know about J50's condition with a focus on the potential negative impacts the proposed efforts could cause to J50 and other members of jpod before any invasive actions occur (ie could the actions cause more harm than good). Also I think we should talk to other non-vet research scientists and experts such as Dr John Ford and Graeme Ellis to get their take on how realistic feeding live chinook to J50 and trying to target her with medications really is (I have serious doudts here) and potential negative outcomes of this activity (eg other members of Jpod eating the medicated chinook). During [redacted]

Best,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

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(604) 666-9965

From: Thornton, Sheila
Sent: Sunday, August 05, 2018 7:18 AM
To: Lowe, Carmel; MacConnachie, Sean; Kennedy, Eddy
Cc: Cottrell, Paul
Subject: J50

Over the last few days, NOAA has organized a consultation team to discuss the condition of J50 and a potential intervention (on the Canadian side, myself, Paul Cottrell, Stephen Raverty, and the OceanWise vet Marty Haulena are all invited participants).

They are on the water today to accomplish the following goals:

1. Fecal sample collection from J50 - Deborah Giles, University of Washington
2. Breath sample collection from J50 - Hanson, NWFSC
3. Sample collection of skin if needed, areas of discoloration have been noted - Giles or Hanson
4. Veterinary medical assessment on J50 - Haulena, Vancouver Aquarium (Dr. Haulena will be on Brad Hanson's vessel)
5. Additional imagery and video of J50 by UAS - Durban and Fernbach, SWFSC and SR3 Images of the flukes and overall skin appearance is of interest to the veterinarians as well as respiration rate.
6. After the veterinary health assessment is complete a veterinarian call will be hosted by NOAA Fisheries - timing to be determined. This will be a small group of veterinarians to discuss the best treatment for J50's condition.

A number of treatment options have been discussed and range from supplemental feeding in the wild via a PVC sluice (Lummi Nation are currently catching and containing large Chinook); oral medication inside a fish, or injection with a dart; penning her, hydrating and medicating, etc. They have a full media network and have contacted all 10 stations in Seattle to coordinate news releases.

Paul is arranging a call with NOAA/DFO to discuss permits required to undertake actions in Canadian waters for Tuesday at 11 am.

On the daily debrief call last night at 9 pm, I reiterated that at this point in time, feeding marine mammals in Canadian waters is a violation under the MMRs, and that the current permit status for NOAA allows for 20m approach for fecal and photos only (Brad Hanson is on Thomas' license). We will be discussing what the options are for these actions to occur in Canadian waters during the call on Tuesday.

I have concerns about the direction of the diagnostics and the potential harm and harassment that these events could induce to J50 and other members of the pod; the discussion on this has been limited. There was concern over a patch of skin behind her blowhole, and a call to swab the area. I provided photos of J50 from June, July and August that show no evidence of lesion, and discussed these with Stephen Raverty and Marty Haulena - I don't feel that attempting a swab is warranted at this time, given the potential for harm. The vets on the call are of the opinion that getting broad spectrum prophylactic treatment on board would be beneficial.

The difficulty is that there may not be a pathology to treat, except for that of ongoing malnutrition due to environmental conditions, which will continue to exist long after the Lummi Nation and the feeding tube have gone back to port.

We have another debrief call at 9 pm tonight; I will update as the information comes in.

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch

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Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

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TAB 10 - UPCOMING ISSUES AND DECISIONS

SECRET

#	ISSUE	DESCRIPTION	MINISTERIAL IMPACT	NEXT STEPS
Tab 7 Guidelines				
1	***Short** title of the item*	*Explain what the issue is. Include who, what, where, when and/or why as needed.* ***This should be as short and concise as possible.*** Do <u>not</u> provide a detailed briefing. More detailed information should be provided through a Memorandum to Minister. This should not be the first time the Minister is hearing about the issue. These are issues where the Minister is required to make a decision on or will attract significant media attention in the next two weeks.	***How does this affect the Minister?** Be as specific as possible.* If Ministerial or Government business is not directly affected or at risk, evaluate whether the information item still needs to go forward under Tab 7.	*1-2 lines on next steps for* ***Ministerial consideration or action**, e.g. memorandum for signature (date expected), Ministerial briefing, etc.* *Next steps should be from a Ministerial perspective: What are upcoming actions, decisions, memos, briefings, etc. for the Minister?* ***Always include a statement on next steps; timeline should be within the next 2 weeks.***

s.21(1)(a)
s.21(1)(b)

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TAB 10 - UPCOMING ISSUES AND DECISIONS

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#	ISSUE	DESCRIPTION	MINISTERIAL IMPACT	NEXT STEPS

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Khanna, Sukriti

From: Malikian, Janine
Sent: August-07-18 6:18 PM
To: Cottrell, Paul
Subject: FOR APPROVAL: J50 Media Lines
Attachments: ML_SRKW_J50.docx

Importance: High

Hi Paul,

We developed some media lines for the issue upon request by MinO.

Could you please let me know of any concerns at your earliest convenience?

Thanks,

Janine

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pages 1504 to / à 1506

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Khanna, Sukriti

From: Ruth Howell - NOAA Federal [redacted]
Sent: August-07-18 11:40 AM
To: Cottrell, Paul
Cc: Jim Milbury - NOAA Federal; Michael Milstein; Teri Rowles
Subject: Re: phone call
Attachments: Communications Plan for Emergency Response to J50.docx

The vagaries of technology!

In the meantime, Paul I want to make sure you and DFO comms folks have our communications plan. I think Michael sent it to you but here it is in case. Also, we are organizing a response partners communications coordination call for tomorrow at 3:30PDT and has invited Lara Sloan. Let us know if others should join. Look forward to future conversations to coordinate efforts.

Ruth

On Tue, Aug 7, 2018 at 11:36 AM, Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca> wrote:
Sorry all. The call-in seems to be muted and I can't unmute it for some reason. Thanks for being on the call. Let's have a follow-up in the next day or so and in the meantime deal with things by email.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Jim Milbury - NOAA Federal
Sent: Tuesday, August 7, 2018 11:33 AM
To: Cottrell, Paul; Michael Milstein; Teri Rowles; Ruth Howell
Subject: phone call

Paul,
I dialed back in and I could hear you, but you couldn't hear me....

Jim Milbury
Public Affairs Officer
NOAA Fisheries West Coast Region
501 W. Ocean Blvd./Suite 4200
Long Beach, CA 90802
Office:562-980-4006
Mobile: [redacted]

Find us online
www.westcoast.fisheries.noaa.gov

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"The field of science needs to communicate with the general public, because the ultimate goal of science is to do good, to gain knowledge, to understand and discover things that are ultimately for the good of mankind." Dr. Anthony S. Fauci, Director NIAID

--
Ruth Howell
Communications Program Manager
Northwest Fisheries Science Center
[redacted]
206.302.2474 (w)
[redacted]

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J50 Crisis Communications Plan
Date: August 5, 2018

Background & Purpose:
Biologists and whale stranding experts are mobilizing to respond to an emaciated and ailing young killer whale of the endangered Southern Resident population, J50 (also known as Scarlet). Response options under consideration range from no intervention to feeding her live chinook salmon and treating her with antibiotics delivered in the fish. This population has been in the public eye locally and internationally and any news generates a high level of interest and concern. This plan is designed to coordinate information flow and review internally, and external updates to interested parties while response activities are underway. Our goal is to provide consistent and timely updates and minimize demand on the response team.

Daily Information Flow
Note: These are the daily check in meetings and do not preclude rapid response to breaking issues. We intend to post/release an update at least once a day.

9PM PDT Response Team Daily Debrief (written summary distributed by Wilkinson)
10PM PDT If Breaking News: WCR Communications Team sends out cleared "holding statement" based on Wilkinson statement for the Hill, Tribes, Media (WCR Clearance, sent to Guidon, Htun, Wilson, Milstein). Broad distribution. Note: Any breaking news during the day WCR will give a 1 hour notice to HQ before distributing to regional media & other audiences.

(next day)
AM EDT (as needed) Notifications to NOAA Fisheries Leadership (Htun, Guidon)
AM EDT (as needed) Congressional Notification as needed (Guidon, Lizama?)
AM PDT (as needed) Tribal Notification (Wilson)
8:30AM PDT NOAA Fisheries + Partners Communications Daily Tag Up (Howell)
10AM PDT Daily Media Call (Hosted by NOAA/Milbury/Barre, other SMEs as needed)
5PM PDT Day-End Communications Check-In (SHORT) (WCR Comms Team, HQ and partners optional but welcome with an invitation)

NOAA Communications Team Members - Participants in 8:30am daily call.
Note: as we reach out to response effort partners, we may add their names

Name	Title & Organization	Roles/Responsibility	Contact Info
Ruth Howell	WCR Branch Chief for Communications and External Affairs	Team Lead	Cell: [redacted] Work: TBD

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Forbes Darby	NWFSC Communications Program Manager	Team Co-Lead; Response Partners communication lead	Cell: [redacted] Work: 206-302-2474
Sarah Mesnick	SWFSC Science Liaison	SWFSC Liaison, Strategic advice, general support as needed	Work: 858-546-7148 Cell: [redacted]
Kate Naughten	NOAA Fisheries Communications Director	HQ Liaison, provide HQ support as needed	Cell: [redacted] Work: 301-427-8057
Michael Milstein	WCR Public Affairs	Media Lead	Cell: [redacted] Work: 503-231-6268
Jim Milbury	WCR Public Affairs	Constituent affairs, video and graphics, clips monitoring, media backup	Work: 562-980-4006 Cell: [redacted]
Amilee Wilson	WCR Tribal Liaison	Tribal Lead	Work: 360-753-5820
Jennifer Ise	WCR Clearance	Clearance, Website updates	Work: 562-980-4046
John Ewald	NOAA Fisheries Public Affairs, Director	Support media efforts, Monitor social media, rumor and sentiment monitoring	301-427-8029; cell [redacted]
Jennie Lyons	NOAA Fisheries Public Affairs	Support media efforts, Monitor social media, rumor and sentiment monitoring	301-427-8013; cell [redacted]
Kate Brogan	NOAA Fisheries Public Affairs	Support media efforts, Monitor social media, rumor and sentiment monitoring	301-427-8030; cell [redacted]
Teri Rowles	NOAA Fisheries Office of Protected Resources	Response Team Liaison	Work: 301-427-8448
Samantha Guidon	NOAA Fisheries Congressional Affairs	Congressional and HQ notification	Work: 301-427-8022 Cell: [redacted]
Emma Htun	NOAA Fisheries Advisor for Regulatory Programs	HQ notification	Work: 301-427-8070
Lynne Barre	WCR Protected Species Seattle Branch Chief	Subject Matter Expert	Work: 206-526-4745 Cell: [redacted]
Jenna Swartz	NOAA Fisheries Social Media	National Social media as needed	Cell: [redacted]
Matt Ellis	NOAA Fisheries Website	National website and social media support as needed	Work: 301-427-8044
Heather Wright,	NOAA Fisheries Video team	Video Support	Wright: 703-867-5569

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Paul Hillman, Deanna Morris			

Invited but optional: Scott Rumsey, Nicolle Hill

Communications Daily Tag Up Purpose & Agenda

- Debrief from response team re: accomplishments
- Hone daily messages
- Determine day's communications strategies
- Review previous day's effort
- Share inquiries and reactions from public and partners

Response Partners Communications Contacts

Organization	Name	Title & Role	Contact Info
University of Washington	Deborah Giles	Researcher, fecal sample collection	[redacted] 916-531-1516
	Sam Wasser	PI, researcher, fecal	[redacted]
	Michelle Ma	Assistant News Director	206-543-2580 [redacted]
Vancouver Aquarium	Martin Haulena Jim McBain	Veterinary Medical Assessment	[redacted]
	Deana Lancaster	Communications Manager	[redacted] office: 604 659 3752 cell: [redacted]
SR3	Holly Fearnbach	Photogrammetry	[redacted]
Department of Fisheries and Oceans	Lara Sloan	DFO Communications Advisor	Office: 250.363.3749 Mobile: [redacted] Lara.Sloan@dfo-mpo.gc.ca
	Paul Cottrell	DFO Marine Mammal	604-240-3841

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	John Ford Stephen Raverty	Coordinator Killer whale biologist Pathologist and expert on diseases in killer whales	250-667-4698 778-839-6916
Lummi Nation	Kurt Russo Back up POC: Tony Hillaire	Lummi Treaty Protection Task Force Lummi Indian Business Counsel, Chief of Staff	360-384-4737 360-312-2100 (office) cell)
Governor Inslee office/WDFW	WDFW Enforcement	JT Austin Tara	
Sea World	Taylor Claytor		cell) 407.226.5257 (office)
The Whale Sanctuary Project	Charles Vinick	Executive Director	805-252-5421 whalesanctuaryproject.org
Whale Museum's Soundwatch Program	Taylor Shedd		812-447-2999

Media POCs:

See media plan here

Jim Milbury (Primary)
Michael Milstein (Backup)
John Ewald/Jennie Lyons/Kate Brogan (Backups; HQ/OPR liaisons if needed)
Maggie Mooney-Seus (Backup)

Subject Matter Experts

Lynne Barre, Primary Spokesperson, SRKW recovery plan and efforts. Management and conservation efforts, response activities: 206-526-4745;
Brad Hanson, SRKW research program, biology, life history, research on limiting factors: 206-860-3220

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John Durban, Photogrammetry, Life history and population dynamics of killer whales: 858-334-2866;
Mike Ford, General SRKW research program, genetics: 206-860-5612;
Teri Rowles, Veterinary consultations/coordination, Health and Stranding program, permit requirements: 301-427-8448;
Sarah Wilkin, stranding program, permit requirements, response activities: 301-427-8470;
Linda Rhodes, microbiology and detecting microbes in biological samples (breath, biopsy, etc): 206-860-3279

Order of Notification

1. Regional and National Fisheries and NOAA Leadership
2. Congressional/Tribal
3. Stakeholders/Partners
4. Public/Media

NOAA Clearance and Notification Process (Social Media posts, talking points, webstories, etc)

Note: WCR has been designated the lead entity. All communications are to be treated like a mini-rollout with WCR Clearance and short suspense HQ, Congressional, & tribal notification.

- Controversial/Breaking News
    - WCR Clearance (SME (Wilkinson), Branch Chief (Barre), ARA (Yates), Ise, Hill/Rumsey)
    - In rapid succession:
        - HQ/Hill notification: Ise sends to Sam G (cc: Emma and Kate)
        - Tribal notification: Wilson sends to tribes (cc: Heather Sagar and Linda Belton?)
- Non-controversial/Previously Cleared information
    - WCR Clearance
- Note: all finalized and approved communications will be stored in the J50 Google Drive (i.e. talking points, daily updates, press releases, etc)

Planned Products Under Development

- Dedicated WCR website for updates & documents (Ise, Peters --complete)
- Email for ideas and suggestions from the public (Killerwhale.help@noaa.gov)
- Photo and Video Footage (Freelancer John Gussman) (Milstein)
- Regular social media posts (Milstein/Milbury, Swartz, Ellis)
- Flickr and Broll for still and video footage (Milbury, Wright)
- Holding statement for J50 disappearance (Milstein, Milbury)
- Media Clips (Milbury)
- FAQs on Feeding and Treatment

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Products and Tactics for Future Consideration

- Interactive Forum on San Juan Islands (TBD; possibly partners)
- Op-Eds or Leadership Statements (As Needed)

Key Messages and Talking Points (As of 8/4/18)

1. **Our scientists, with other experts, are on the water right now assessing the health of J50, the juvenile female Southern Resident killer whale known as Scarlet that has been seen in poor condition.**
    a. Sightings indicate that J50 is emaciated and is sometimes lethargic in the water, but still has periods of activity, including feeding. Analysis of a small sample of her breath did not definitively indicate an infection or illness, although it does not rule one out either.
    b. The steps we are taking to understand and treat J50 require a scientifically sound approach. We must approach this carefully and deliberately so that if we decide to feed her, we avoid creating a dependence on supplied food.
    c. To inform development of additional emergency response and medical treatment plans, scientists will;
        i. Continue with coordinated observations and documentation of behavior and condition (using vessel and Unmanned Aerial Systems, or UAS).
        ii. Conduct a veterinary health assessment.
        iii. Collect additional diagnostic samples (e.g., fecal, breath, exudate or skin patch) if possible over the next several days.
    d. These efforts are being conducted by experts authorized under NOAA Fisheries Marine Mammal Health and Stranding Response Program permit and coordinated between U.S. and Canada.

2. **Over the weekend (Aug 4-5), these experts – including the top veterinarians and whale biologists from both the U.S. and Canada – will be evaluating short-term response options to help this whale that has grown weaker over time. These options range from doing nothing to getting food and medicine to the emaciated whale.**
    a. Operations to assist J50 could begin as soon as this Monday (Aug 6).
    b. We ask boaters and aircraft to avoid the area where researchers are operating and follow all regulations and air traffic restrictions.

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   c. A plan to assess the possibility of emergency medical treatment is in development for evaluation by NOAA Fisheries under our Marine Mammal Health and Stranding Response Program permit.
   d. Details of the plan are pending and risks to J50 and other Southern Residents will be evaluated and minimized to the extent possible prior to authorization.

3. **We share the public's concern over the condition of the Southern Residents, and in particular, J50. While difficult, this is also opportunity for researchers to more closely study and understand the root cause of J50's condition in hope of preventing or treating other whales in the future.**
   a. NOAA Fisheries and partners are also monitoring the situation with J35, also known as Tahlequah, who has been carrying her dead calf for over a week.
   b. We all feel the loss of another calf, and our scientists continue to monitor her and encourage efforts to reduce vessel disturbance around her.
   c. An emergency response for J35 has not yet been evaluated or initiated.

4. **We're also continuing our longer-term efforts to address the three main threats to these whales: having enough salmon to eat, vessel traffic and underwater noise, and marine pollution.**
   a. Refer to the Species in the Spotlight 5-year action plan.

5. **Working with partners in other federal agencies, academia, and the private sector, we've developed advanced unobtrusive scientific methods to learn about the lives of these killer whales, monitor their status, and understand threats to their population.**
   a. The techniques include: photogrammetry, tagging, genetic analysis of scat, and breath sampling for microbes.

6. **We have more information about efforts to recover the Southern Residents on our website. Also, we will provide progress updates on our Facebook page. In the meantime, we ask for the public's cooperation in steering clear of the immediate area while research and emergency response activities are taking place.**

Key High-level Messages:

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- Southern Resident killer whales are a highly endangered, specialized population of killer whales that now number 75, the lowest in decades. Female whales are especially valuable to the population given their reproductive potential.
- Safety is paramount. The first priority of all operations remains the safety of responders and the whales.
- We are drawing on the knowledge and expertise of the world's top experts to develop and implement the response plan, and will consistently reevaluate the benefits of intervention against the risk of disturbance to the J-pod as a whole.
- Biologists recognize that most killer whales that have deteriorated to the extent of J50 do not recover. Attempting intervention has rarely if ever been attempted before. Doing so is an experimental approach, with uncertain chances of success.
- While we are now focused on short-term support for J50, we continue to work with partners across the region to advance plans for the long-term recovery of Southern Resident killer whales. Everyone on the West Coast has a role in protecting the whales.

Background:

- J-50 history: Born in late December 2014. Mother, J16. Drone photogrammetry studies by Durban (NOAA/SWFSC), Fearnbach (SR3) and Barrett-Lennard (Vancouver Aquarium) have documented J-50's small size for her age since her first year of life, and notably poorer body condition in 2017. More recently, Center for Whale Research observed further declining body condition from boat observations starting in January 2018 culminating in the current conspicuous depression behind the blowhole "peanut head". Activity level and association with mom and pod has varied.

- Consultation call 7/26: Gaydos/SeaDoc Society held a call of researchers and vets to discuss history and current condition of J50 based on field observations and sampling. Activity level and association with mom and pod has continued to vary in recent observations. No obvious skin condition. Recent odor from breath smelled by Giles/UW. Fecal samples collected by Hanson/NWFSC and Giles/UW from whale groups with J50 and frozen, but have not been analyzed or identified as J50 samples. Video and breath sample collected by Hanson/NWFSC 7/21, no breath odor detected, analysis pending. Vessel activity near J50 reduced by proactive efforts by Pacific Whale Watch Association, Soundwatch, Enforcement and coordinated in US and Canadian waters. Next steps- continued photo, video and behavior monitoring, UAS photogrammetry field visit planned starting 8/1. Vets will develop sampling protocol for cytology/culture samples from breath and feces.

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- Consultation calls 8/2: NOAA hosted a call to review updates. Photos from UAS (Durban/SWFSC, Fearnbach/SR3) collected on 8/1 show J50 in very poor condition (similar to the measured condition of her cousin J52 before he disappeared in 2017) and show white patch behind the blowhole and it is unknown if on skin or exudate from blowhole. UAS observations of J50 close with J16, J50 near J26 chasing fish at surface, and J50 defecation. Lagging behavior may be increasing, and in general whale displays an unusual labored ("ploughing") action when surfacing, but periods of activity also observed by UAS and from boat observations (US and Canada). Additional information to be collected- UAS will continue including photogrammetry measurements of condition, photo documentation of skin condition and respiration rates. Breath sample and confirmed collection a fecal sample from J50 for PCR analysis if possible. A veterinary health assessment was identified as a priority and NOAA has provided authorization for several vets.

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-07-18 10:55 AM
To: Cottrell, Paul
Cc: McRory, Jody; Greene, Annely
Subject: RE: Section 38

Hi Paul,

No problem. On a related note, do you have any updates on J50 and NOAA's plan to provide antibiotics?

Thanks,

Kendra

From: Cottrell, Paul
Sent: August-07-18 11:43 AM
To: Moore, Kendra
Cc: McRory, Jody; Greene, Annely
Subject: Re: Section 38

Hi Guys,
I haven't forgot about the CA's. Just crazy here with J50 and SRKW's. I'm on water the next couple days, but hope to knuckle down on Thursday and look at the CA's.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Moore, Kendra
Sent: Tuesday, August 7, 2018 8:40 AM
To: Cottrell, Paul
Cc: McRory, Jody; Greene, Annely
Subject: RE: Section 38

Great, thanks Paul!

From: Cottrell, Paul
Sent: August-07-18 11:27 AM
To: Moore, Kendra
Cc: McRory, Jody; Greene, Annely
Subject: RE: Section 38

Hi Kendra,
Pacific contact info MM licencing:

Annely Greene
Marine Mammal Program Officer
Fisheries & Oceans Canada
Suite 200 - 401 Burrard Street

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Vancouver, B.C. V6C 3S4
Telephone: 604-666-0071
Annely.Greene@dfo-mpo.gc.ca

Cheers,

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Moore, Kendra
Sent: Tuesday, August 07, 2018 8:22 AM
To: Cottrell, Paul; Hall, Patt; Elliott, Isabelle; Bieren, Stacey; Kean, Jackie; Rivierre, Antoine
Cc: McRory, Jody
Subject: Section 38

Hi everyone,

Randy has approved the section 38 application document, which is attached.

Please review by end of day tomorrow August 8, 2018 and I will send off to translation.

In the meantime, I will need your regional licencing information (please see the highlighted section on the last page) to include for the national website to direct applicants accordingly.

Thanks,

Kendra

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Khanna, Sukriti

From: Harber, Lee
Sent: August-07-18 12:57 PM
To: Moore, Kendra; Cottrell, Paul
Subject: Re: SRKW-J50

Hi Kendra, Paul will have the latest.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Moore, Kendra
Sent: Tuesday, August 7, 2018 12:47 PM
To: Harber, Lee; Cottrell, Paul
Subject: SRKW-J50

Hi Lee and Paul,

I was wondering if you could give me a quick update on the J50 situation and the media briefing, as senior management was looking for more information.

Thanks so much,

Kendra Moore

Senior Fisheries and Aquaculture Management Officer |
Agente Principale, Gestion des pêches et de l'aquaculture
Integrated Resource Management | Gestion intégrée des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
Kendra.moore@dfo-mpo.gc.ca
Tel: 613-407-8791

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Khanna, Sukriti

From: Malikian, Janine
Sent: August-07-18 1:57 PM
To: Girouard, Louise; Bate, Dan; Cottrell, Paul; Sloan, Lara; Davies, Leri
Subject: Summary: NOAA Media call for update on SRKW J50 health status

Hi all,

NOAA led a media call this morning to give an update on the health status of SRKW J50 whose rapidly deteriorating condition has led the agency to propose (last Friday) an emergency action to treat her.

Paul Cottrell, DFO Marine Mammal Coordinator, took part in the call alongside NOAA.

DFO is working with NOAA and other scientific partners on the effort.

Salient points from the call:

- J50 and her pod were last seen on Friday, current foggy conditions on the water aren't helping with visibility
- NOAA's proposal calls for a 4-step process following the sighting of J50 and proposes to do the following:
  - A veterinary health assessment
  - Sampling and analysis of breath/fecal matter
  - Depending on analysis, injection of long-term acting antibiotic
  - Depending on analysis, delivery of medication through the administration of fish
- Yesterday NOAA assembled veterinary supplies and did a test-run of the transport of fish.
- Response team looking today at roles and responsibilities in proposed activities. Team will be ready to deploy upon sighting of Jpod.
- Licensing for health assessment and sampling/analysis already granted on US side, licensing now sought for injection/feeding. Paul indicated separate licensing needed on Canadian side, DFO is looking into putting this in place ASAP.
- NOAA is accommodating requests from media for ride-alongs.
- In response to question from reporter, NOAA rep indicated possibility of J50 being already deceased.
- In response to question form reporter, she also indicated that feeding fish to J50 would be to deliver medication, and not to meet her nutritional requirements.

Cheers,

Janine

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Khanna, Sukriti

From: Girouard, Louise
Sent: August-07-18 5:05 PM
To: Cottrell, Paul; Thornton, Sheila
Cc: Bate, Dan; Malikian, Janine
Subject: Did we see J50 near Port Renfrew???

Just on a call with NOAA comms and they are saying that we have sighted – do you have details...

L

Louise Girouard
Regional Director Communications | Directrice régionale des communications
Pacific Region | Région du Pacifique
Fisheries, Oceans and Canadian Coast Guard | Pêches, Océans et Garde côtière canadienne
Louise.Girouard@dfo-mpo.gc.ca Tel: 604.666.3855| Cell: [redacted]

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Khanna, Sukriti

From: Girouard, Louise
Sent: August-07-18 7:59 PM
To: Thornton, Sheila; Cottrell, Paul; Davis, Neil
Cc: Antcliffe, Bonnie; Malikian, Janine; Bate, Dan; Thomson, Andrew; Reid, Rebecca
Subject: FOR INFORMATION: J50 tweets and media coverage

Good evening,

Thank you for all your help today – tweets are out re: J50 sighting today.

CP has also filed a first story. This story from The Canadian Press

L

DFO Pacific @DFO_Pacific · 18m
We are happy to confirm that Southern Resident #KillerWhale J50 and her mother J16 were located today in #JuandeFuca Strait. Our experts are collaborating with @NOAAFish_WCRO and other partners to examine J50 to determine next steps. ow.ly/OnPo30ljop1

2 6

DFO Pacific @DFO_Pacific · 4h
Our scientists, veterinarians, biologists & marine mammal coordinator are collaborating with @NOAAFish_WCRO & other international research partners to locate & monitor Southern Resident #KillerWhale J50. We are ready to help in this collaborative mission. ow.ly/A1MB30ljjFh

3 5

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Khanna, Sukriti

From: Harber, Lee
Sent: August-07-18 11:51 AM
To: Cottrell, Paul
Subject: FW: J50 and Tab 10

Hi Paul, science has asked that I pull together a response – Neil indicated that you may have something or would be best positioned to provide info – if you are able to can you please send me a few bullets.

Cheers
lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Kennedy, Eddy
Sent: 2018–August-07 11:38 AM
To: Harber, Lee; Cottrell, Paul
Cc: Lowe, Carmel; MacDougall, Lesley
Subject: RE: J50 and Tab 10

That's what I am using

From: Harber, Lee
Sent: August-07-18 11:37 AM
To: Kennedy, Eddy; Cottrell, Paul
Cc: Lowe, Carmel; MacDougall, Lesley
Subject: RE: J50 and Tab 10

Hi Eddy, apparently Paul and Sheila have the latest – please see attached.

Paul, would you be able to provide a few bullets for the Tab 10?

Thanks
lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Kennedy, Eddy
Sent: 2018–August-07 11:26 AM
To: Harber, Lee
Cc: Lowe, Carmel; MacDougall, Lesley
Subject: RE: J50 and Tab 10

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Working on it

From: Harber, Lee
Sent: August-07-18 11:25 AM
To: Kennedy, Eddy
Cc: Lowe, Carmel; MacDougall, Lesley
Subject: RE: J50 and Tab 10

Hi Eddy, for sure I can pull this together. Is science able to provide a few bullets for me to work into a response?

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: (613)

From: Kennedy, Eddy
Sent: 2018–August-07 11:20 AM
To: Harber, Lee
Cc: Lowe, Carmel; MacDougall, Lesley
Subject: FW: J50 and Tab 10

Hi Lee,
I am passing along Carmel's request that the Tab 10 submission should come from FM. Are you able to prepare the submission today?
Let me know if you have questions
Eddy

Eddy Kennedy
Manager, Ecosystem Sciences Division | Gestionnaire, Division des sciences écosystème
Pacific Biological Station | Station de biologie du Pacifique
Fisheries and Oceans Canada | Pêches et Océans Canada
Tel/Tél: 250-756-3360
Cell:
E-Mail: eddy.kennedy@dfo-mpo.gc.ca

From: Lowe, Carmel
Sent: August-07-18 10:29 AM
To: Kennedy, Eddy
Cc: MacDougall, Lesley
Subject: Fw: J50 and Tab 10

Eddy - welcome back!

Carmel

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Nadeau, Simon <Simon.Nadeau@dfo-mpo.gc.ca>
Sent: Tuesday, August 7, 2018 10:20

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To: Lowe, Carmel; Laverdure, Louise; Landry, Jean
Subject: J50 and Tab 10

Hi Carmel

Will the region be producing something for Tab 10 today on this?

Let us know.

Simon

From: Hodgins, Jill
Sent: August-07-18 11:28 AM
To: McCallum, Barry; Vézina, Alain; Bliss, Doug; de Lafontaine, Yves; Wang, Sen; Lowe, Carmel; Béchard, Geneviève; Laverdure, Louise; Moore, Wayne; Foster, Sophie; Kristmanson, James
Cc: Armstrong, Carolyn; Asselin, Andréanne; Tudorache, Cristina; Berube, Linda; Dickie, Catherine; Jobes, James; Keough, Brittany; LeBlanc, Denise; Nagy, Aimee J; Lauzon-Legault, Janie; Thompson, Susan; Curtis, Kathryn
Subject: FW: Tab 10 - Upcoming Issues and Decisions (Look Ahead Planning Binder)

Bonjour/Hello

Tab 10. Only include items that require Ministerial action, are of strategic interest, or that are likely to attract significant public attention within the next 2 weeks. Do not use the tab as a means of briefing the Minister. **Include key dates within the next two weeks under Next Steps for Ministerial consideration or action**, e.g. Ministerial decision, event, briefing memo to MINO, etc. Key dates will be added to the WAG as an "Upcoming Issues" row. **See updated guidelines in separate document.**

De : McPherson, Arran
Envoyé : 7 août 2018 09:50
À : Lowe, Carmel; Laverdure, Louise; Landry, Jean; Nadeau, Simon
Objet : RE: J50

Thanks.

From: Lowe, Carmel
Sent: Sunday, August 5, 2018 1:00 PM
To: McPherson, Arran <Arran.McPherson@dfo-mpo.gc.ca>; Laverdure, Louise <Louise.Laverdure@dfo-mpo.gc.ca>; Landry, Jean <Jean.Landry@dfo-mpo.gc.ca>
Subject: Fw: J50

A heads up on this emerging issue..... There is a call scheduled to discuss on Tuesday that I will participate in...

Carmel

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Sunday, August 5, 2018 09:13
To: Thornton, Sheila; Lowe, Carmel; MacConnachie, Sean; Kennedy, Eddy
Cc: Davis, Neil; Thomson, Andrew

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Subject: RE: J50

Thanks Sheila,

[redacted]

Best,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Thornton, Sheila
Sent: Sunday, August 05, 2018 7:18 AM
To: Lowe, Carmel; MacConnachie, Sean; Kennedy, Eddy
Cc: Cottrell, Paul
Subject: J50

Over the last few days, NOAA has organized a consultation team to discuss the condition of J50 and a potential intervention (on the Canadian side, myself, Paul Cottrell, Stephen Raverty, and the OceanWise vet Marty Haulena are all invited participants).

They are on the water today to accomplish the following goals:

1. Fecal sample collection from J50 - Deborah Giles, University of Washington
2. Breath sample collection from J50 - Hanson, NWFSC
3. Sample collection of skin if needed, areas of discoloration have been noted - Giles or Hanson
4. Veterinary medical assessment on J50 - Haulena, Vancouver Aquarium (Dr. Haulena will be on Brad Hanson's vessel)
5. Additional imagery and video of J50 by UAS - Durban and Fernbach, SWFSC and SR3 Images of the flukes and overall skin appearance is of interest to the veterinarians as well as respiration rate.
6. After the veterinary health assessment is complete a veterinarian call will be hosted by NOAA Fisheries - timing to be determined. This will be a small group of veterinarians to discuss the best treatment for J50's condition.

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A number of treatment options have been discussed and range from supplemental feeding in the wild via a PVC sluice (Lummi Nation are currently catching and containing large Chinook); oral medication inside a fish, or injection with a dart; penning her, hydrating and medicating, etc. They have a full media network and have contacted all 10 stations in Seattle to coordinate news releases.

Paul is arranging a call with NOAA/DFO to discuss permits required to undertake actions in Canadian waters for Tuesday at 11 am.

On the daily debrief call last night at 9 pm, I reiterated that at this point in time, feeding marine mammals in Canadian waters is a violation under the MMRs, and that the current permit status for NOAA allows for 20m approach for fecal and photos only (Brad Hanson is on Thomas' license). We will be discussing what the options are for these actions to occur in Canadian waters during the call on Tuesday.

[redacted]

The difficulty is that there may not be a pathology to treat, except for that of ongoing malnutrition due to environmental conditions, which will continue to exist long after the Lummi Nation and the feeding tube have gone back to port.

We have another debrief call at 9 pm tonight; I will update as the information comes in.

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

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Khanna, Sukriti

From: Kaba, Kyle
Sent: August-07-18 1:50 PM
To: Harber, Lee; Payne, Brigid
Cc: Cottrell, Paul; Thornton, Sheila; Brekke, Heather; Moore, Kendra
Subject: RE: J50 - MINO request
Attachments: RE: J50

Thanks Lee. Appears that it was tasked out to multiple groups. Attached is the response Adam Burns shared with MINO a few minutes ago.

From: Harber, Lee
Sent: August-07-18 1:33 PM
To: Payne, Brigid
Cc: Cottrell, Paul; Thornton, Sheila; Brekke, Heather; Moore, Kendra; Kaba, Kyle
Subject: RE: J50 - MINO request

Hi Brigid, we are reviewing a draft summary with the resource management group in NHQ who was also asked to provide updates by Mark. I think he has tasked this request out to more than one group. Adam Burns will be providing a summary to Mark soon.

lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Brekke, Heather
Sent: 2018–August-07 1:23 PM
To: Payne, Brigid; Thornton, Sheila
Cc: Cottrell, Paul; Harber, Lee
Subject: RE: J50 - MINO request

Hi Brigid,

I don't have any update from today; however, Paul Cottrell and/or Lee Harber may be able to fill in some details. They have been working on this as well.

Best
Heather

From: Payne, Brigid
Sent: August-07-18 12:54 PM
To: Brekke, Heather; Thornton, Sheila
Subject: FW: J50 - MINO request

Hello,

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Are you aware of any updates we can provide to MINO?

Brigid

From: Kaba, Kyle
Sent: August-07-18 12:51 PM
To: Payne, Brigid
Cc: Webb, Cheryl
Subject: FW: J50

Hi Brigid – Mark from MINO has asked if we have any additional details on this situation with J50. The article was posted earlier today so we may not have anything additional at this point but wanted to check with you. Let me know if there's any additional info you're aware of that can be shared.

Thanks,
Kyle

From: Knudsen, Mark <Mark.Knudsen@dfo-mpo.gc.ca>
Sent: Tuesday, August 7, 2018 1:33 PM
To: Butcher, Ashley; Kaba, Kyle
Subject: J50

Do we have any details on this one?

https://www.ctvnews.ca/sci-tech/scientists-race-to-find-and-treat-ailing-killer-whale-off-vancouver-island-1.4043335

Mark Knudsen
Policy Advisor - Pacific | Conseiller en politiques - Pacifique

200 Kent Street | Floor 15 | Ottawa, Ontario | K1A 0E6

T: 613-992-3474
F: 613-947-7081
E: Mark.Knudsen@dfo-mpo.gc.ca

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Khanna, Sukriti

From: Burns, Adam
Sent: August-07-18 1:07 PM
To: Butcher, Ashley; Kaba, Kyle; Patrick, Lindsey
Cc: Kahn, Zoe; Malko, Carol; Jarjour, Jasmine; Lapointe, Sylvie; Reid, Rebecca
Subject: RE: J50

J50 is a juvenile female member of the Southern Resident Killer Whale population with a poor body condition, thought to be starving and possibly suffering from infection. Her body condition is comparable with past situations where individuals have died.

Due to public spotlight on this situation in the media, NOAA drafted several proposals for potential emergency intervention that were shared with DFO late last week to address the body condition of J50, which include a number of treatment options to address J50's condition: supplemental feeding in the wild via a sluice off the back of a boat (Lummi Nation in Washington are currently catching large Chinook for this purpose); oral medication inside fish for feeding to J50, injection of medication with a dart; and penning J50 to enable hydration, feeding, and medication, etc.

NOAA is consulting with several Canadian officials to discuss the condition of J50 and the potential for intervention (on the Canadian side: Sheila Thornton (DFO Science), Paul Cottrell (DFO Marine Mammal Unit), veterinarian Stephen Raverty (Province of BC), and veterinarian Marty Haulena (Oceanwise). DFO Pacific region is also in the process of considering licencing that would allow for the US to approach and potentially feed and/or medicate J50 in Canadian waters.

NOAA held a media briefing at 10:00 am Pacific today. Paul Cottrell participated on DFOs/Canada's behalf and provided a brief update on DFO's Marine Mammal research crews who have been working the past few days on the West Coast of Vancouver Island searching for the animal.

Given the limited number of females in such a small population (75 individuals), it would be a significant blow to the population to lose this individual.

From: Butcher, Ashley
Sent: August 7, 2018 1:36 PM
To: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Kaba, Kyle <Kyle.Kaba@dfo-mpo.gc.ca>; Patrick, Lindsey <Lindsey.Patrick@dfo-mpo.gc.ca>
Cc: Kahn, Zoe <Zoe.Kahn@dfo-mpo.gc.ca>; Malko, Carol <Carol.Malko@dfo-mpo.gc.ca>; Jarjour, Jasmine <Jasmine.Jarjour@dfo-mpo.gc.ca>
Subject: Fw: J50

From: Knudsen, Mark <Mark.Knudsen@dfo-mpo.gc.ca>
Sent: Tuesday, August 7, 2018 1:33 PM
To: Butcher, Ashley; Kaba, Kyle
Subject: J50

Do we have any details on this one?

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https://www.ctvnews.ca/sci-tech/scientists-race-to-find-and-treat-ailing-killer-whale-off-vancouver-island-1.4043335

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Policy Advisor - Pacific | Conseiller en politiques - Pacifique

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Khanna, Sukriti

From: Davis, Neil
Sent: August-07-18 2:08 PM
To: Payne, Brigid; Cottrell, Paul; Harber, Lee
Subject: RE: J50 - MINO request
Attachments: RE: J50

Hi Brigid

We just provided edits on a summary that NHQ drafted for the same request. See attached. I don't think anything further is required at this point

Neil

From: Payne, Brigid
Sent: Tuesday, August 7, 2018 12:57 PM
To: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Cc: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: FW: J50 - MINO request

Sending this over to you as well in case you have information. MINO request for any further information relative to what is in the news article.

Brigid

From: Payne, Brigid
Sent: August-07-18 12:54 PM
To: Brekke, Heather; Thornton, Sheila
Subject: FW: J50 - MINO request

Hello,

Are you aware of any updates we can provide to MINO?

Brigid

From: Kaba, Kyle
Sent: August-07-18 12:51 PM
To: Payne, Brigid
Cc: Webb, Cheryl
Subject: FW: J50

Hi Brigid – Mark from MINO has asked if we have any additional details on this situation with J50. The article was posted earlier today so we may not have anything additional at this point but wanted to check with you. Let me know if there's any additional info you're aware of that can be shared.

Thanks,
Kyle

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From: Knudsen, Mark <Mark.Knudsen@dfo-mpo.gc.ca>
Sent: Tuesday, August 7, 2018 1:33 PM
To: Butcher, Ashley; Kaba, Kyle
Subject: J50

Do we have any details on this one?

https://www.ctvnews.ca/sci-tech/scientists-race-to-find-and-treat-ailing-killer-whale-off-vancouver-island-1.4043335

Mark Knudsen
Policy Advisor - Pacific | Conseiller en politiques - Pacifique

200 Kent Street | Floor 15 | Ottawa, Ontario | K1A 0E6

T: 613-992-3474
F: 613-947-7081
E: Mark.Knudsen@dfo-mpo.gc.ca

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Khanna, Sukriti

From: Davis, Neil
Sent: August-07-18 12:57 PM
To: Harber, Lee; Burns, Adam
Cc: Thomson, Andrew; Reid, Rebecca
Subject: RE: J50

[redacted]

From: Harber, Lee
Sent: Tuesday, August 7, 2018 12:17 PM
To: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>
Cc: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: RE: J50

Looks good from my end – I have checked in with Science. [redacted] Pls see red text below.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Burns, Adam
Sent: 2018–August-07 11:51 AM
To: Thomson, Andrew; Reid, Rebecca; Harber, Lee; Davis, Neil
Subject: FW: J50

Hi,

Does this work for you folks to respond to MINO (see below)?

AB

From: Moore, Kendra
Sent: August 7, 2018 2:35 PM
To: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>
Cc: Pellerin, Patricia <Patricia.Pellerin@dfo-mpo.gc.ca>
Subject: RE: J50

Hi Adam,

Below is a paragraph summarizing the situation:

[redacted]

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[redacted]

Kendra

From: Burns, Adam
Sent: August-07-18 2:10 PM
To: Jenkins, Randy; Moore, Kendra; Gilchrist, Brett
Cc: Pellerin, Patricia
Subject: Re: J50

Informal

Sent from my BlackBerry 10 smartphone on the Rogers network.

From:
Jenkins,
Randy
Sent:
Tuesday,
August
7, 2018
2:10 PM
To:
Burns,
Adam;
Moore,
Kendra;
Gilchrist,
Brett
Cc:

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Pellerin,
Patricia
Subject:
RE: J50

Are they looking for informal response in email format or do more formal ISSUE/INFO note?

From: Burns, Adam
Sent: Tuesday, August 7, 2018 2:04 PM
To: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>; Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>
Cc: Pellerin, Patricia <Patricia.Pellerin@dfo-mpo.gc.ca>
Subject: Re: J50

Please pull together a response that can be sent to mino.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From:
Jenkins,
Randy
Sent:
Tuesday,
August
7, 2018
2:03 PM
To:
Burns,
Adam;
Moore,
Kendra;
Gilchrist,
Brett
Subject:
RE: J50

There was string of emails late last week or over the weekend... will see if I can find

From: Burns, Adam
Sent: Tuesday, August 7, 2018 1:52 PM
To: Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>; Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Subject: FW: J50

From: Butcher, Ashley
Sent: August 7, 2018 1:36 PM
To: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Kaba, Kyle <Kyle.Kaba@dfo-mpo.gc.ca>; Patrick, Lindsey <Lindsey.Patrick@dfo-mpo.gc.ca>
Cc: Kahn, Zoe <Zoe.Kahn@dfo-mpo.gc.ca>; Malko, Carol <Carol.Malko@dfo-mpo.gc.ca>; Jarjour, Jasmine <Jasmine.Jarjour@dfo-mpo.gc.ca>
Subject: Fw: J50

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From: Knudsen, Mark <Mark.Knudsen@dfo-mpo.gc.ca>
Sent: Tuesday, August 7, 2018 1:33 PM
To: Butcher, Ashley; Kaba, Kyle
Subject: J50

Do we have any details on this one?

https://www.ctvnews.ca/sci-tech/scientists-race-to-find-and-treat-ailing-killer-whale-off-vancouver-island-1.4043335

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E: Mark.Knudsen@dfo-mpo.gc.ca

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Khanna, Sukriti

From: Girouard, Louise
Sent: August-07-18 8:35 PM
To: Thornton, Sheila; Cottrell, Paul
Cc: Malikian, Janine; Bate, Dan
Subject: J35 any further news?

Hi Paul,

NOAA is getting questions re: J35 and her calf now that we have issued the news re: J50.

Just a heads-up that you will most likely be asked at the media briefing tomorrow.

Thanks,

Louise

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Khanna, Sukriti

From: Malikian, Janine
Sent: August-07-18 5:42 PM
To: Girouard, Louise; Cottrell, Paul
Cc: Bate, Dan
Subject: Confirmation of J50 sighting in Juan de Fuca Strait

FYI – just spoke with Sheila, who confirmed that her team has sighted J50 with her mother J16 in Juan de Fuca Strait, in Canadian waters.

Sheila will notify NOAA.

I'll modify media lines.

Janine

s.19(1)

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Khanna, Sukriti

From: [redacted]
Sent: August-07-18 12:19 PM
To: Cottrell, Paul
Subject: CTV Interview

Hey Paul – just following up to make sure I have the correct email…..It's [redacted] with CTV News Vancouver Island. I'm doing a story today about the efforts to save J50 and am really hoping to interview you. Are you available for a quick skype, facetime or phone interview?

I can be reached at this email or my cell at [redacted]

Thanks,
[redacted]

[redacted]
CTV News Vancouver Island | [redacted]
1420 Broad Street
Victoria, BC V8W 2B1
Canada

s.19(1)

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Khanna, Sukriti

From: [redacted]
Sent: August-07-18 12:14 PM
To: Cottrell, Paul
Subject: CTV Vancovuer Island Interview

Hey Paul,

It's [redacted] with CTV News Vancouver Island. I'm doing a story today about the efforts to save J50 and am really hoping to interview you. Are you available for a quick skype, facetime or phone interview?

I can be reached at this email or my cell at [redacted]

Thanks,
[redacted]

[redacted]
CTV News Vancouver Island | [redacted]
1420 Broad Street
Victoria, BC V8W 2B1
Canada

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-07-18 9:08 AM
To: Kennedy, Eddy; Thornton, Sheila
Cc: Covert, Paul; Davis, Neil
Subject: Re: Weekly ROCS meeting material call out

You bet.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Kennedy, Eddy
Sent: Tuesday, August 7, 2018 9:01 AM
To: Thornton, Sheila; Cottrell, Paul
Cc: Covert, Paul
Subject: FW: Weekly ROCS meeting material call out

Sheila/Paul: I think there should be a ROCS submission on the recent J50 situation. Can we put one together for this week's submission?

From: Dickie, Catherine
Sent: July-30-18 7:21 AM
To: XPAC SC Executive; Chamberlain, Jon; Leblanc, Mark
Subject: Weekly ROCS meeting material call out

Hello all,

Please provide your weekly ROCS update by **no later than 10:00am Wednesday morning**. If you have no items, a nil report would be appreciated.

Please provide your content in the following format:

- 1 paragraph - make the first sentence the summary for each issue so that it can stand along in case it is the only sentence read;
- describe issue - Keep the description short and to the point: what does the DM/MO care about? What is the problem, are we working on it, is it going to get better or worse?
- describe mitigating actions
- use plain language, no acronyms, no technical jargon. Write simply and clearly; consider the audience will not know basic facts, and they don't understand short hand or jargon

Thank you,
Catherine

Catherine Dickie

A/Executive Assistant to the Regional Director Science, Science Branch
Fisheries and Oceans Canada | Government of Canada
catherine.dickie@dfo-mpo.gc.ca | Tel : 250-729-8369

A/Adjointe exécutive à la directrice régionale, Direction des sciences
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Mbarushimana, Jenny

From: Burns, Adam
Sent: August-07-18 6:14 PM
To: Davis, Neil; Harber, Lee; Thomson, Andrew; Jenkins, Randy
Subject: Fw: J50

We should probably plan on daily updates - every two days at most.

Randy if you could work with region to pull it together I can send it forward.

Let's aim for another update by noon Eastern on Thursday.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Butcher, Ashley <Ashley.Butcher@dfo-mpo.gc.ca>
Sent: Tuesday, August 7, 2018 8:14 PM
To: Burns, Adam; Kaba, Kyle; Patrick, Lindsey
Cc: Kahn, Zoe; Malko, Carol; Jarjour, Jasmine; Lapointe, Sylvie; Reid, Rebecca
Subject: RE: J50

Thanks Adam, MINO has asked to receive regular updates on this as more information becomes available.

Thanks,

Ashley Butcher
DMO
613-947-4561

From: Burns, Adam
Sent: Tuesday, August 7, 2018 4:07 PM
To: Butcher, Ashley <Ashley.Butcher@dfo-mpo.gc.ca>; Kaba, Kyle <Kyle.Kaba@dfo-mpo.gc.ca>; Patrick, Lindsey <Lindsey.Patrick@dfo-mpo.gc.ca>
Cc: Kahn, Zoe <Zoe.Kahn@dfo-mpo.gc.ca>; Malko, Carol <Carol.Malko@dfo-mpo.gc.ca>; Jarjour, Jasmine <Jasmine.Jarjour@dfo-mpo.gc.ca>; Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>; Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>
Subject: RE: J50

> J50 is a juvenile female member of the Southern Resident Killer Whale population with a poor body condition, thought to be starving and possibly suffering from infection. Her body condition is comparable with past situations where individuals have died.
>
> Due to public spotlight on this situation in the media, NOAA drafted several proposals for potential emergency intervention that were shared with DFO late last week to address the body condition of J50, which include a number of treatment options to address J50's condition: supplemental feeding in the wild via a sluice off the back of a boat (Lummi Nation in Washington are currently catching large Chinook for this purpose); oral medication inside fish for feeding to J50, injection of medication with a dart; and penning J50 to enable hydration, feeding, and medication, etc.

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NOAA is consulting with several Canadian officials to discuss the condition of J50 and the potential for intervention (on the Canadian side: Sheila Thornton (DFO Science), Paul Cottrell (DFO Marine Mammal Unit), veterinarian Stephen Raverty (Province of BC), and veterinarian Marty Haulena (Oceanwise). DFO Pacific region is also in the process of considering licencing that would allow for the US to approach and potentially feed and/or medicate J50 in Canadian waters.

NOAA held a media briefing at 10:00 am Pacific today. Paul Cottrell participated on DFOs/Canada's behalf and provided a brief update on DFO's Marine Mammal research crews who have been working the past few days on the West Coast of Vancouver Island searching for the animal.

Given the limited number of females in such a small population (75 individuals), it would be a significant blow to the population to lose this individual.

From: Butcher, Ashley
Sent: August 7, 2018 1:36 PM
To: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Kaba, Kyle <Kyle.Kaba@dfo-mpo.gc.ca>; Patrick, Lindsey <Lindsey.Patrick@dfo-mpo.gc.ca>
Cc: Kahn, Zoe <Zoe.Kahn@dfo-mpo.gc.ca>; Malko, Carol <Carol.Malko@dfo-mpo.gc.ca>; Jarjour, Jasmine <Jasmine.Jarjour@dfo-mpo.gc.ca>
Subject: Fw: J50

From: Knudsen, Mark <Mark.Knudsen@dfo-mpo.gc.ca>
Sent: Tuesday, August 7, 2018 1:33 PM
To: Butcher, Ashley; Kaba, Kyle
Subject: J50

Do we have any details on this one?

https://www.ctvnews.ca/sci-tech/scientists-race-to-find-and-treat-ailing-killer-whale-off-vancouver-island-1.4043335

Mark Knudsen
Policy Advisor - Pacific | Conseiller en politiques - Pacifique

200 Kent Street | Floor 15 | Ottawa, Ontario | K1A 0E6

T: 613-992-3474
F: 613-947-7081
E: Mark.Knudsen@dfo-mpo.gc.ca

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Khanna, Sukriti

From: Malikian, Janine
Sent: August-07-18 6:24 PM
To: Davis, Neil
Subject: FOR APPROVAL: J50 Media Lines
Attachments: ML_SRKW_J50.docx

Importance: High

Hi Neil,

[redacted]

We developed some media lines on the J50 issue upon request by MinO.

Could you please let me know of any concerns at your earliest convenience?

Thanks,

Janine

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s.21(1)(a)

s.21(1)(b)

DRAFT

Media Lines

Southern Resident Killer Whale J50

Issue

Pages 1505 to / à 1506

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

s.21(1)(a)
s.21(1)(b)
s.23

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Khanna, Sukriti

From: Brekke, Heather
Sent: August-08-18 8:57 AM
To: Busby, Corina
Subject: FW: For review - additional suggested edits to the RKW amended RS
Attachments: For review - Suggested edits_RKW aRS_TDV.docx

[redacted]

Thanks
Heather

From: Doniol-Valcroze, Thomas
Sent: August-08-18 8:20 AM
To: McMillan, Christie; Ford, John K; Thornton, Sheila
Cc: Brekke, Heather
Subject: RE: For review - additional suggested edits to the RKW amended RS

Hi,

[redacted]

Best,
Thomas

De : McMillan, Christie
Envoyé : 7 août 2018 18:17
À : Ford, John K; Thornton, Sheila; Doniol-Valcroze, Thomas

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Cc : Brekke, Heather
Objet : For review - additional suggested edits to the RKW amended RS

Hi all,

[redacted]

s.21(1)(a)

s.21(1)(b)

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[redacted]

Cheers,

Christie

Christie McMillan
Species At Risk Recovery Planner
Fisheries and Oceans Canada
604-666-4775
Christie.McMillan@dfo-mpo.gc.ca

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Government of Canada / Gouvernement du Canada

Fisheries and Oceans Canada
Pacific Region
Suite 200 - 401 Burrard Street
Vancouver, British Columbia
V6C 3S4

Pêches et Océans Canada
Région du Pacifique
Pièce 200 - 401 rue Burrard
Vancouver (C.-B.)
V6C 3S4

Parks Canada Agency
Coastal British Columbia Field Unit Office
2220 Harbour Road
Sidney, BC
V8L 2P6

Agence Parcs Canada
Bureau d'unité de gestion de la Côte de la Colombie-Britannique
2220m chemin Harbour
Sidney, BC
V8L 2P6

AUG 17 2018

Ms. Dyna Tuytel and Margot Venton
Ecojustice
800, 744-4 Avenue SW
Calgary, Alberta, T2P 3T4

Dear Ms Tuytel and Ms. Venton,

Thank you for your correspondence of July 11, 2018, sent on behalf of your clients the David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation, and World Wildlife Fund Canada (the "Conservation Groups"), in response to Fisheries and Oceans Canada (DFO) and the Parks Canada Agency (PCA) external review process on section 7 (critical habitat) of the draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada*.

With regard to your comments under heading II regarding the timing of the recovery strategy amendment process, the proposed Amended Recovery Strategy is anticipated to be posted on the Species at Risk (SAR) Public Registry in late August for a 60-day public comment period as required under the *Species at Risk Act*, with the final Amended Recovery Strategy posted by late November 2018. While protection through a Critical Habitat Order (CHO) is legally due within 180 days after final posting, both DFO and PCA are working toward complementary timelines, such that the order will be made by December 2018. This process has been expedited in recognition of the imminent threats to survival and recovery faced by the Southern Resident Killer Whale (SRKW).

We thank you for the general support expressed under heading III for the designation of the two proposed critical habitat areas. As for your specific request (B) to increase the approach distance to 400 m, the 200 m distance is aligned with DFO science advice [http://waves-vagues.dfo-mpo.gc.ca/Library/40600385.pdf] and the amended *Marine Mammal Regulations* published on July 11, 2018.

Thank you for your recommendation to modify the attribute description of the acoustic environment for Resident Killer Whales (Table 4; Amended Recovery Strategy). The attribute description has been updated to: "anthropogenic noise level that does not interfere with life functions and is sufficient for effective acoustic social signaling and echolocation to locate prey." "Interfere' has been used instead of 'impede' (suggested by the Conservation Groups) because sound transmission is frequently impeded by natural conditions in the environment thereby making it difficult to achieve or demonstrate unimpeded transmission.

The request (C) to acknowledge that critical habitat requires not only prey abundance but also access to prey is already addressed in the document (See page 66 under "Physical Disturbance").

Canada

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The attribute of unimpeded physical space around individual whales to support the feeding and foraging, reproduction, socializing and resting functions of critical habitat is included in Table 4.

The concerns regarding the designation of critical habitat using the bounding box approach (D) have been addressed in the proposed version of the Amended Recovery Strategy. The language describing critical habitat has been edited to clarify that the areas within the identified geographical boundaries are critical habitat, given that they contain the described biophysical features, attributes and the functions that they support. See page 57 of the proposed Amended Recovery Strategy for this updated text.

Thank you again for your letter. We welcome the opportunity to work alongside the Conservation Groups to understand how we can be effective in our approaches to protect and recover Resident Killer Whales.

Sincerely,

Cheryl Webb
Regional Director,
Ecosystems Management Branch
Fisheries and Oceans Canada

Helen Davies
Field Unit Superintendent,
Coastal British Columbia Field Unit
Parks Canada Agency

cc: Jeffery Young and Scott Wallace, David Suzuki Foundation

Christianne Wilhelmson and Rachael Merrett, Georgia Strait Alliance

Michael Jasny, Natural Resources Defense Council

Misty MacDuffee, Paul Paquet, Ross Dixon, Raincoast Conservation Foundation

Hussein Alidina, World Wildlife Fund – Canada

The Honourable Jonathan Wilkinson, Minister of Fisheries and Oceans

The Honourable Catherine McKenna, Minister of Environment and Climate Change Canada and Minister Responsible for Parks Canada

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Dozie, Juachi

From: Brekke, Heather
Sent: August-08-18 11:46 AM
To: Jones, Lisa Ann
Subject: text
Attachments: For review - Suggested edits_RKW aRS_Aug8_Pac.docx

There are further pending changes to some CH sentences on p. 78 (geographic description), Title of Figure 4 and 5, and first paragraph of section 7.3 (p. 64-65). These are currently being reviewed by Julie Stewart, Corina, and Nick Winfield

See attached for a quick reference

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

Page 1513

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page 1548

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Dozie, Juachi

From: Brekke, Heather
Sent: August-08-18 4:27 PM
To: Davis, Neil
Subject: RE: Week of Aug 20: Black Binder Submission
Attachments: Black Binder_Aug20_RKWaRS.docx

I agree – I was trying to keep it consistent with theirs. Please see abbreviated version attached.

From: Davis, Neil
Sent: August-08-18 4:00 PM
To: Brekke, Heather
Subject: RE: Week of Aug 20: Black Binder Submission

Yes, good to submit so RDG sees it, but can you please shorten it somewhat?

Thx
Neil

> **From:** Brekke, Heather
> **Sent:** Wednesday, August 8, 2018 3:02 PM
> **To:** Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
> **Subject:** RE: Week of Aug 20: Black Binder Submission
>
> I've created a row for this attached. NHQ SARA has already put this in the black binder on their end, and I have taken the bulk of this from their submission. I wanted to check with you to see whether it is still worth submitting up via Pacific so the RDG is aware?
>
> Thanks
> Heather
>
> **From:** Davis, Neil
> **Sent:** August-07-18 3:28 PM
> **To:** Brekke, Heather
> **Subject:** FW: Week of Aug 20: Black Binder Submission
>
> Can you pls flag that the aRS consultation period starts?
>
> > **From:** Barton, Meagan
> > **Sent:** Tuesday, August 7, 2018 3:11 PM
> > **To:** XPAC-GRP, FAM EXEC <XPAC-GRP_FAMEXEC@dfo-mpo.gc.ca>
> > **Cc:** XPAC FM RHQ Admin <XPACFMRHQAdmin@dfo-mpo.gc.ca>
> > **Subject:** FW: Week of Aug 20: Black Binder Submission
> >
> > Please have all submissions to me by COB Aug 13.
> >
> > Thanks,

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Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Kaba, Kyle
Sent: August-07-18 2:50 PM
To: XPAC RMC EA
Subject: Week of Aug 20: Black Binder Submission

All: Please provide input, including from the Regional perspective. The reports will be shared with the DM and MO.

Please provide ONLY information that the Minister and/or Minister's Office should be made aware of because of the potential for it to attract public or media attention.

Issues: Please explain why it is an issue, anticipated reaction and plans to manage the reaction.

Upcoming decisions: here are some guidelines to help you complete this report:
- Only put items that need to be approved by the Minister and where applicable include the MECTS #
- If a memo is already in the Minister's office awaiting for a decision, it should not be in the report
- Do not include approval of MC, TB Submissions or Regulations
- You can include an MC if you need a decision from the Minister before you can get MC approved.
- Try to put a precise date for the timeline

Anticipated Reports: This would include studies, publications, etc. Please identify any reports expected for public release whether they are from DFO or from others but with implications for DFO.

Non-DFO Annual Reports Tabled by other Departments: please include any reports being published by other Government Departments with implications for DFO.

Please ensure your input is approved by your RMC member

Issues expected from Aug 20 – Sept 3
Reports to be released by
Consultations & Events Planned
Upcoming decisions

Thank you.

Kyle Kaba
Team Leader, Regional Director General's Office
Fisheries and Oceans Canada/Government of Canada
Kyle.kaba@dfo-mpo.gc.ca Tel: 604-666-7102 Fax: 604-666-8956

Chef d'équipe, Bureau de la Directrice générale régionale
Pêches et Océans Canada / Gouvernement du Canada
Kyle.kaba@dfo-mpo.gc.ca Tel: 604-666-7102 Télécopieur: 604-666-8956

s.21(1)(a) s.21(1)(b)

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TAB 7 - UPCOMING ISSUES AND DECISIONS

Unclassified

#	ISSUE	DESCRIPTION	MINISTERIAL IMPACT	NEXT STEPS / STATUS
	INSERT BRANCH NAME – INSERT REPORTING PERIOD			
	Short title of the item	Explain what the issue is. Include who, what, where, when and/or why as needed. **This should be as short and concise as possible.** Do not provide a detailed briefing. More detailed information should be provided through a Memorandum to Minister. This should not be the first time the Minister is hearing about the issue. These are issues where the Minister is required to make a decision on or will attract significant media attention in the **next two weeks**.	**How does this affect the Minister?** Be as specific as possible. If Ministerial or Government business is not directly affected or at risk, evaluate whether the information item still needs to go forward.	1-2 lines on next steps for **Ministerial consideration or action**, e.g. memorandum for signature (date expected), Ministerial briefing, etc. Next steps should be from a Ministerial perspective: What are upcoming actions, decisions, memos, briefings, etc. for the Minister? **Always include a statement on next steps; timeline should be within the next 2 weeks.**
1	Publication of the proposed *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada* on the Species at Risk Registry for a 60-day online consultation period	An amendment to the Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada (aRS) will be published on the Species at Risk Public Registry for a 60-day national online comment period, anticipated to start August 20, 2018. This amendment includes two additional areas of proposed critical habitat (CH) and clarifies the functions, features and attributes of existing and proposed CH. DFO Pacific region conducted an external review on the draft aRS from June 12 – July 11, 2018. Significant attention and responses were received; however, the majority addressed concern with the process and did not result in substantive changes to the aRS.		Once approved by the Minister the aRS will be posted to the SAR Public Registry for a 60d national public consultation period, anticipated to occur August 20-October 19, 2018. Notification of the posting of the proposed aRS will be sent to all interested parties, including key Indigenous groups and stakeholders; distributed via the SAR public registry notification service; and will be communicated via social media to ensure that all interested parties have an opportunity to provide input. The final amended Recovery Strategy is anticipated to be published by late November 2018 and the CH protected via a CH Order by December 2018.

NOTE:

- Only include issues that are of relevance to the Minister. If the Minister doesn't need to know, do not include it. A 'NIL' response is acceptable.
- Always spell out an acronym the first time it appears.
- 9 point Arial font, single spaced. Messaging should be high-level. Always write in complete sentences – no point form.
- If your submission is not classified as SECRET please provide the appropriate classification.

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Dozie, Juachi

From: Brekke, Heather
Sent: August-08-18 3:02 PM
To: Davis, Neil
Subject: RE: Week of Aug 20: Black Binder Submission
Attachments: Black Binder_Aug20_RKWaRS.docx

I've created a row for this attached. NHQ SARA has already put this in the black binder on their end, and I have taken the bulk of this from their submission. I wanted to check with you to see whether it is still worth submitting up via Pacific so the RDG is aware?

Thanks
Heather

From: Davis, Neil
Sent: August-07-18 3:28 PM
To: Brekke, Heather
Subject: FW: Week of Aug 20: Black Binder Submission

Can you pls flag that the aRS consultation period starts?

From: Barton, Meagan
Sent: Tuesday, August 7, 2018 3:11 PM
To: XPAC-GRP, FAM EXEC <XPAC-GRP_FAMEXEC@dfo-mpo.gc.ca>
Cc: XPAC FM RHQ Admin <XPACFMRHQAdmin@dfo-mpo.gc.ca>
Subject: FW: Week of Aug 20: Black Binder Submission

Please have all submissions to me by COB Aug 13.

Thanks,

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Kaba, Kyle
Sent: August-07-18 2:50 PM
To: XPAC RMC EA
Subject: Week of Aug 20: Black Binder Submission

All: Please provide input, including from the Regional perspective. The reports will be shared with the DM and MO.

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Please provide ONLY information that the Minister and/or Minister's Office should be made aware of because of the potential for it to attract public or media attention.

Issues: Please explain why it is an issue, anticipated reaction and plans to manage the reaction.

Upcoming decisions: here are some guidelines to help you complete this report:
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- You can include an MC if you need a decision from the Minister before you can get MC approved.
- Try to put a precise date for the timeline

Anticipated Reports: This would include studies, publications, etc. Please identify any reports expected for public release whether they are from DFO or from others but with implications for DFO.

Non-DFO Annual Reports Tabled by other Departments: please include any reports being published by other Government Departments with implications for DFO.

Please ensure your input is approved by your RMC member

Issues expected from Aug 20 – Sept 3
Reports to be released by
Consultations & Events Planned
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Thank you.

Kyle Kaba
Team Leader, Regional Director General's Office
Fisheries and Oceans Canada/Government of Canada
Kyle.kaba@dfo-mpo.gc.ca Tel: 604-666-7102 Fax: 604-666-8956

Chef d'équipe, Bureau de la Directrice générale régionale
Pêches et Océans Canada / Gouvernement du Canada
Kyle.kaba@dfo-mpo.gc.ca Tel: 604-666-7102 Télécopieur: 604-666-8956

s.21(1)(a) s.21(1)(b)

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TAB 7 - UPCOMING ISSUES AND DECISIONS

Unclassified

#	ISSUE	DESCRIPTION	MINISTERIAL IMPACT	NEXT STEPS / STATUS
	INSERT BRANCH NAME – INSERT REPORTING PERIOD			
	Short title of the item	Explain what the issue is. Include who, what, where, when and/or why as needed. **This should be as short and concise as possible.** Do not provide a detailed briefing. More detailed information should be provided through a Memorandum to Minister. This should not be the first time the Minister is hearing about the issue. These are issues where the Minister is required to make a decision on or will attract significant media attention in the **next two weeks**.	**How does this affect the Minister?** Be as specific as possible. If Ministerial or Government business is not directly affected or at risk, evaluate whether the information item still needs to go forward.	1-2 lines on next steps for **Ministerial consideration or action**, e.g. memorandum for signature (date expected), Ministerial briefing, etc. Next steps should be from a Ministerial perspective: What are upcoming actions, decisions, memos, briefings, etc. for the Minister? **Always include a statement on next steps; timeline should be within the next 2 weeks.**
1	Publication of the proposed *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada* on the Species at Risk Registry for a 60-day online consultation period	An amendment to the Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada (aRS) is anticipated to be published on the Species at Risk Public Registry for a 60-day national online comment period. This fulfils requirements of SARA s.43(1). This amendment includes two additional areas of special importance as proposed critical habitat (CH) for Resident Killer Whales, and to provides clarification of the functions, features and attributes for all critical habitat identified for Resident Killer Whales. DFO Pacific region conducted a 30-day online external review on the draft amended Recovery Strategy (aRS) from June 12 – July 11, 2018. Nearly 700 responses to the external review were received; all feedback was considered but did not result in substantive changes to the document as the majority addressed concern with the process (e.g., consultation timing and timelines, uncertainty with respect to socio-economic impacts or Indigenous rights, misunderstanding of the implications to fisheries on designation of additional areas of CH) but did not provide additional information or data that would result in changes to the proposed CH.		Once approved by the Minister the aRS will be posted to the SAR Public Registry for a 60d national public consultation period, anticipated to occur August 20-October 19, 2018. The Department will promote the consultation opportunity to key Indigenous groups and stakeholders through direct notifications, through the SAR public registry notification service and through social media to ensure that all interested parties have an opportunity to provide input. Following the 60d consultation period, changes, as/if required will be made to the aRS and it will be posted of the registry as final (late November 2018). Shortly following this publication, which officially designates the additional areas as CH for the RKW, it is anticipated that a CHO will be established for its protection (December 2018).

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s.21(1)(a) s.21(1)(b)

TAB 7 - UPCOMING ISSUES AND DECISIONS

Unclassified

#	ISSUE	DESCRIPTION	MINISTERIAL IMPACT	NEXT STEPS / STATUS
		The program is working under extremely tight timelines in order to publish the final amended Recovery Strategy by late November 2018 (as communicated to Ecojustice) and enact a Critical Habitat Order by December 2018 for the protection of the SRKW.		

NOTE:

- Only include issues that are of relevance to the Minister. If the Minister doesn't need to know, do not include it. A 'NIL' response is acceptable.
- Always spell out an acronym the first time it appears.
- 9 point Arial font, single spaced. Messaging should be high-level. Always write in complete sentences – no point form.
- If your submission is not classified as SECRET please provide the appropriate classification.

s.19(1)

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Dozie, Juachi

From: Brekke, Heather
Sent: August-08-18 2:44 PM
To: 'Lim, Rangyn'
Cc: Robinson, Orla
Subject: RE: Potential input to ECHO online whale training tutorial for mariners- Module 1
Attachments: Storyboard-Whales-Mod1-V0.4_rl LB_rl_hb.docx

Hi Rangyn,

Please see attached, and apologies for the delay in getting this to you.

Best,
Heather

From: Lim, Rangyn [mailto:
Sent: July-31-18 2:44 PM
To: Brekke, Heather
Cc: Robinson, Orla
Subject: RE: Potential input to ECHO online whale training tutorial for mariners- Module 1

Hi Heather,

I'm just following up on Orla's email below to quickly enquire on whether you think you will have time this week to review the first module content of the online marine mammal training tool?

Any feedback on Orla's email below would be great and if you're pressed for time, we'd particularly appreciate your feedback on pages 5 and 7 of the document. Note that this version attached also includes Lynne Barre's (NOAA) recent feedback as well. And if you're unable to provide a review, please also let us know as we are keen to wrap this particular module up by Friday.

Thanks again!
Rangyn

From: Robinson, Orla
Sent: July-17-18 4:36 PM
To: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>
Cc: Lim, Rangyn <
Subject: RE: Potential input to ECHO online whale training tutorial for mariners- Module 1

Many thanks Heather. Really appreciate you trying to find time to review and your high level feedback now on text around MMR on pg 5. The reference to the regs here are intended to provide a very high level overview of what the regs actually relate to but perhaps this revised text would be a bit more accurate given recent changes:

Fisheries Act - Marine Mammal Regulations
In Canadian waters, whales are also protected under the Marine Mammal Regulations (MMR) of the *Fisheries Act* which prohibits the disturbance of marine mammals. Amendments to the regulations in July 2018 include additional detail on the definition of 'disturbance' and also provide measures for reducing disturbance associated with vessel presence.

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In later modules (modules 4 and 5) additional references are provided on the set back distances for different species (along with a link to the nifty DFO infographic). We could share those modules with you too when they are ready to go for review, but we didn't want to overwhelm you ☺ Also, I believe it is intended that coastguard will review module 4 and Paul C will review module 5.

Please feel free to track in any changes to module 1 with the available time you have and we will do our best to address.

Thanks again,
orla

From: Brekke, Heather [mailto:Heather.Brekke@dfo-mpo.gc.ca]
Sent: Tuesday, July 17, 2018 2:57 PM
To: Robinson, Orla <
Cc: Lim, Rangyn <
Subject: RE: Potential input to ECHO online whale training tutorial for mariners- Module 1

Hi Orla,

Thanks for your email. I will do my best to get through this by Monday at the latest. In a quick glance, I would recommend changing the text for the Marine Mammal Regulations section on page 5 given the recent changes published last week.

Best,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

From: Robinson, Orla [mailto:
Sent: July-17-18 2:49 PM
To: Brekke, Heather
Cc: Lim, Rangyn
Subject: Potential input to ECHO online whale training tutorial for mariners- Module 1

Hi Heather,

I am hoping to seek your assistance on a current project that the ECHO Program and BC Ferries is working closely together on. As you may recall from our last AWG meeting and project updates, Leslie had mentioned the development of an online training tutorial, called "Whales in our Waters", to help mariners identify cetaceans and navigate safely around them.

BC Ferries has been leading the project with ECHO's assistance on the marine mammal sections of the module. We have also partnered with Lance Barrett-Lennard and his CORI team to help confirm and review the species identifications sections of the tutorial. Given that we also provide some background context in the tutorial around Canadian and US regulations/SARA etc. and reference recent regulatory changes and requirements, it would be extremely valuable to have your lens on reviewing the accuracy and information presented and I was wondering if you might be open to a short review from the Canadian perspective? Lynne Barre from NOAA will be reviewing from US perspective.

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I attach Module 1 which is a word document with approximately 6 slides and pop ups. If pressed for time, the main pages that reference legislation and that we would appreciate your feedback on are from Page 5 -8. We are aiming to have feedback on this module in the coming week, by July 24th. Apologies for short notice but we would be appreciative of any comments, edits or suggestions that you could offer by then – please feel free to track changes as needed.

We would of course be more than happy to acknowledge DFO as a reviewer and could credit DFO accordingly, as you see fit. Leslie has also reached out to Paul Cottrell to help with the review of a different module (Module 5), which provides information on reporting for marine mammals in distress.

Thanks for your consideration of this request. Please let me know if you have any questions.
Thanks,

Orla

Orla Robinson M.Sc.
Program Manager, ECHO Program

PORT of vancouver

Vancouver Fraser Port Authority
100 The Pointe, 999 Canada Place
Vancouver, B.C. Canada V6C 3T4

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Whales in our Waters: MODULE 1 STORYBOARDS - Protection of Whales

Document Revision History

REVISION NUMBER	DATE OF ISSUE	AUTHOR(S)	DESCRIPTION
0.1	03 April 2018	Julie Birlew / Rangyn Lim	Working Draft
0.2	07 April 2018	Julie Birlew / Rangyn Lim	Incorporated first round feedback from Rangyn Lim and Orla Robinson
0.3	01 May 2018	Julie Birlew / Rangyn Lim	Incorporated comments received from second round feedback (external SMEs)
0.4	06 May 2018	Julie Birlew / Rangyn Lim	Incorporated killer whale and humpback whale details with Critical Habitat area maps. Incorporated additional graphics.

Module Learning Objectives:

Topics / Learning Objectives	Est. Duration (mins)	Sources of Content (E.g. work instruction, SME, existing training material)	Notes
1. Protection of Whales			SME – Rangyn Lim / Orla Robinson
Discuss the need for the protection of vulnerable whale species in BC including: • Understanding the *Species at Risk Act* (SARA) • Understand *Fisheries Act*, Marine Mammal Regulations • Knowing the designations of endangered and threatened. • Listing critical habitat areas on the West Coast of BC for SRKW, NRKW and Humpback Whales	1-2 Slides	P. 9 of Mariner's Guide Reference to critical habitat maps and areas of importance 1. SRKW 2. Humpback whale	Intro Module (not Module 1) should also include a page of recognition of sponsors/partners.

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Topics / Learning Objectives	Est. Duration (mins)	Sources of Content (E.g. work instruction, SME, existing training material)	Notes
Describe Vessel Disturbances including: • Strikes and factors that increase their risk • Physical disturbance • Acoustic disturbances (vessel noise)	2 Slides Video	P. 10-12 of Mariner's Guide P. 24 – 25 Vessel size comparison to whale http://wildwhales.org/threats/vessel-disturbance/ Cavitation/underwater vessel noise video clip.	

Module Notes:

- Module is currently **6 slides**. Our design estimated 4 slides.
- Tech Team suggested it would be a nice clean look if we did not have a scrolling vertical bar; therefore we try to keep the content per storyboard/slide to the amount you could view without scrolling.
- If you are not familiar with the term "Lightbox" this is a window that opens on top of the page you are on (the page you are on appears dimmer in the background.)
- Graphics, diagrams, photo's etc. have been snagged to show placement. The original source will need to be provided to the technical team.
- Photos shall include credit only when displayed. File name is there for technical team.
- References have been included as Blue Superscript. Numeric Superscript matches Mariner's Guide. Asterisk reference is included in that Storyboard's notes.
    - Tech Team Note: we discussed having this as an asterisk (or another symbol if you wish) that a user could click to see reference (similar to the way references function on this page: https://clearseas.org/underwater-noise/). User could then "click-through" to get to the reference page.
    - On the Reference page, all references should be listed alphabetically for ease of maintenance.
- There will be an Introduction Module prior to Module 1 to explain Course Objectives / Credits.
- The Help Icon will link to help on how to navigate within the tutorial.
- Module 1 Links for References Page:
    - https://www.portvancouver.com/environment/water-land-wildlife/marine-mammals/echo-program/
    - https://www.portvancouver.com/wp-content/uploads/2017/07/Mariners-Guide-to-Whales-Dolphins-Porpoises-of-Western-Canada.pdf
    - http://wildwhales.org/threats/

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MODULE 1 Protection of Whales

In this module...

This module will explore the need for the protection of at-risk whale species. You will learn about legislation and designations to protect cetacean species and be able to identify critical habitat and Important Areas on the Pacific NorthwWest ~~Coast~~ for killer whales and humpback whales.

By completing this module, you will also have an opportunity to learn about ~~where and~~ how vessels may be affecting whales.

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In this ~~guide~~tutorial, the term 'whale' will be used to describe all whales, dolphins and porpoises collectively.

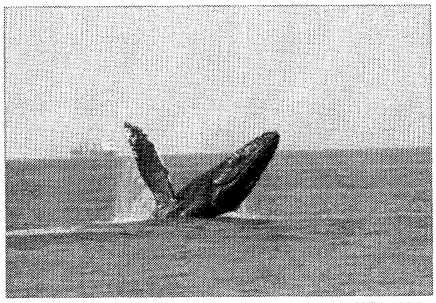

Photo Credit: Joan Lopez (File: ECHO ONLY - JOAN LOPEZ PHOTO CREDIT - HB - Georgia Strait 2.JPG)

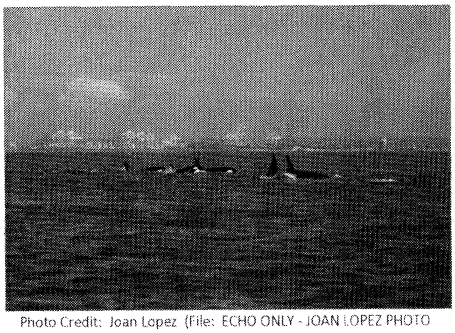

Photo Credit: Joan Lopez (File: ECHO ONLY - JOAN LOPEZ PHOTO CREDIT – SRKW – Deltaport.JPG)

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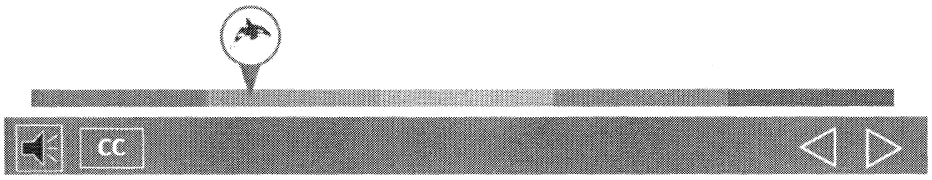

Page Name	00-1-1
Notes for Tech Team	• Clicking on the whale icon reveals coloured bar and fun fact. • Clicking on the glossary word reveals small box with definition with a link to the corresponding term on the Glossary page. • Glossary Term: cetacean, Critical Habitat • Photos should include photo credit below photo. File name is included for Tech Team reference only and should **not** appear on the actual page. • Clicking on Left arrow takes user to Page 00-0-X (Last page of Intro Module) • Clicking on Right arrow takes user to Page 00-1-2
Feedback/ Revisions	

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Protecting At-Risk Whales

The Pacific Northwest is known for its beautiful coastlines and diverse marine environment. Both Canada and the United States have legislation and regulations in place to help protect and conserve marine life and their habitat.

As we discuss different whale species in the next few topics, you will find it helpful to understand the legislative framework and terms described below.

Species at Risk Act

The *Species at Risk Act* (SARA) came into effect in 2003 to provide for the recovery of wildlife species that are extirpated, endangered, or threatened as a result of human activity, and to manage species of special concern to prevent them from becoming endangered or threatened. ~~was created to prevent Canadian indigenous species, subspecies, and distinct populations from becoming~~ **extirpated** ~~or extinct, to provide for the recovery of~~ **endangered** ~~or~~ **threatened** ~~species, and encourage the management of other~~ **special concern** ~~species to prevent them from becoming at risk.~~ Critical habitat must be identified, where possible, for species listed as Extirpated, Endangered, or Threatened, and subsequently protected~~has also been defined for some SARA listed species~~. **Click to learn more about these terms under SARA.**

Fisheries Act - Marine Mammal Regulations

In Canadian waters, whales are also protected under the Marine Mammal Regulations (MMR) of the *Fisheries Act* which prohibits the disturbance of marine mammals. The MMR were amended in July 2018 to include additional detail on the definition of 'disturbance', identify a minimum approach distance of 200m for killer whales within the Pacific as well as 100m for all other cetaceans, and to provide measures for reducing disturbance associated with vessel presence.

Marine Mammal Protection Act

The *Marine Mammal Protection Act* (MMPA) was established to prevent marine mammal species and population stocks from declining beyond the point where they ceased to be significant functioning elements of the ecosystems of which they are a part. The MMPA prohibits the "taking" of any marine mammal species in U.S. waters where "take" means to hunt, harass ~~(approach within 100 yards)~~, capture, or kill any marine mammal or attempt~~ing~~ to do so.

Endangered Species Act

Under the *Endangered Species Act* (ESA), the U.S. federal government has the responsibility to conserve~~protect~~ endangered species, threatened species and their ecosystems, including critical habitat in U.S. waters. **Click to learn more about these terms under ESA.**

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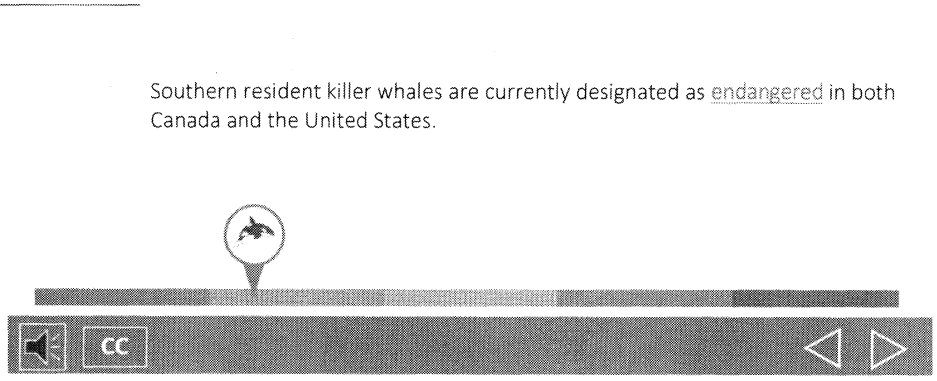

Page Name	00-1-2
Notes for Tech Team	• Glossary Terms: extirpated, endangered, threatened, special concern, critical habitat • Clicking on the text **"Click to learn more about these terms under SARA"** opens Lightbox Page 00-1-2a • Clicking on the text **"Click to learn more about these terms under ESA"** opens Lightbox Page 00-1-2b • Clicking on Left arrow takes user to Page 00-1-1 • Clicking on Right arrow takes user to Page 00-1-3
Feedback/ Revisions	[redacted]

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Canadian *Species at Risk Act* (SARA) Terms

Endangered: Species facing imminent extirpation or extinction.

Examples of listed species within Canadian Pacific waters: blue whale, sei whale, North Pacific right whale, ~~and~~ southern resident killer whale, basking shark, and northern abalone.

Threatened: Species which are likely to become endangered if nothing is done to reverse the factors leading to their extirpation or extinction.

Examples of listed species: fin whale, northern resident killer whale, offshore killer whale and Bigg's (transient) killer whale.

Special concern: Species which may become threatened or endangered because of a combination of biological characteristics and identified threats.

Examples of listed species: grey whale, humpback whale, harbour porpoise, stellar sea lion.

Extirpated: Species that no longer exist in the wild in Canada, but exist elsewhere in the wild.

Critical habitat: is defined under the *Species at Risk Act* (SARA) as "the habitat that is necessary for the survival or recovery of a listed wildlife species that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species". SARA not only prohibits the killing, harming, harassing, capturing or taking of species at risk, but also makes it illegal to destroy their critical habitats (e.g., through acoustic degradation).

More information can be found online.

Comment [HB1]: Suggested using text direct from SARA. I did not confirm this.

Comment [HB2]: Suggest including here as it is the only marine fish listed as Endangered within Pacific, and Abalone as this may be of interest to those reading this document.

Page Name	00-1-2a: Lightbox SARA Terms
Notes for Tech Team	• Clicking on **"Click to learn more about these terms under SARA"** opens this lightbox. • Clicking on **X** closes Lightbox. • Glossary Terms: Endangered, threatened, special concern, extirpated, critical habitat. • Add link to https://www.canada.ca/en/environment-climate-change/services/environmental-enforcement/acts-regulations/about-species-at-risk-act.html
Feedback/ Revisions	

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U.S. *Endangered Species Act* Terms

Endangered: Species that are in danger of extinction throughout all or a significant portion of their range.

Threatened: Species that are likely to become endangered in the foreseeable future.

Critical habitat: specific areas that are:

- within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection.
- outside the geographical area occupied by the species if it is determined that the area itself is essential for conservation.

More information can be found online.

Comment [LR3]: Add link

Page Name	00-1-2b: Lightbox ESA Terms
Notes for Tech Team	• Clicking on **"Click to learn more about these terms under ESA"** opens this lightbox. • Clicking on **X** closes Lightbox. • Glossary Terms: endangered, threatened, critical habitat • Add link to https://www.fisheries.noaa.gov/topic/laws-policies#endangered-species-act
Feedback/ Revisions	

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Whales in our Waters

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Critical Habitat and Important Areas on the West Coast

If you are a seasoned mariner, you likely appreciate the view from your wheelhouse and already have an understanding of areas for heightened awareness of whales.

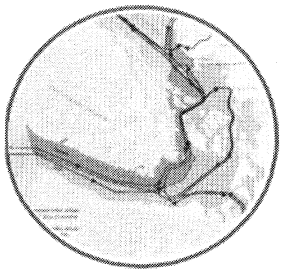
The maps below highlight critical habitat and important areas that have been identified for two commonly sighted species that are listed under SARA and need protection in our waters: the northern and southern resident killer whale and humpback whale.

You will learn much more about how to identify these species and where they are usually found in **Module 2: Whale Identification.**

As of July 2018, Canadian regulation requires all vessels to stay at least 200 m away from killer whales.

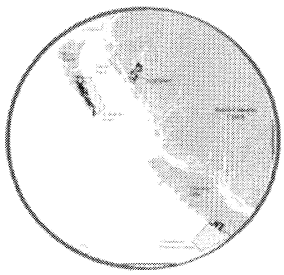
U.S. Regulations also require that all vessels stay at least 200 yards away from killer whales.

Select the images below to view each map



Map Credit: Mariner's Guide

Northern and Southern Resident Killer Whale Critical Habitat



Map Credit: Mariner's Guide

Humpback Whale Important Areas

Comment [LR4]: Julie – please update with the new map from the lightbox.

Comment [L5]: On the map below it looks like some parts of Southern Puget Sound are missing. Here is a link to the US critical habitat map and GIS data http://www.westcoast.fisheries.noaa.gov/maps_data/endangered_species_act_critical_habitat.html

Comment [LR6]: Julie – I have replaced this map in the lightbox to include more of the USA region. Please replace in the lightbox as well as this circle image.

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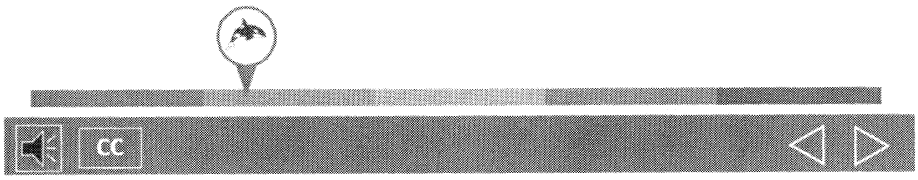
Did you know that there are less than 100 southern resident killer whales remaining in the population?

Photo Credit: Ocean Wise
(File: pg.43)

The southern BC / Washington population of humpback whales is estimated at approximately 200-400 whales.

Photo Credit: Ocean Wise
(File: pg.29)

Click on the image of each species to learn important facts about their SARA listing status and population size.



Page Name	00-1-3
Notes for Tech Team	• Glossary Term: Critical habitat • Clicking on Module 2: Whale Identification takes user to Page 00-2-1. • Clicking on **Northern and Southern Resident Killer Whale Critical Habitat Map** opens Lightbox Page 00-1-3a. • Clicking on **Humpback Whale Important Areas** opens Lightbox Page 00-1-3b. • Clicking on the killer whale and humpback whale images opens Lightbox Page 00-1-3c. • Clicking on Left arrow takes user to Page 00-1-2 • Clicking on Right arrow takes user to Page 00-1-4 • Map source file: Killer Whale Map: SRKW and NRKW Critical Habitat Map.jpg • Map source file: Humpback Whale Map: Humpback Important Areas Map.jpg • Image source file: Killer Whale – p43 {Rangyn – require source} • Image source file: Humpback Whale – p29 {Rangyn – require source}
Feedback/ Revisions	• [redacted]

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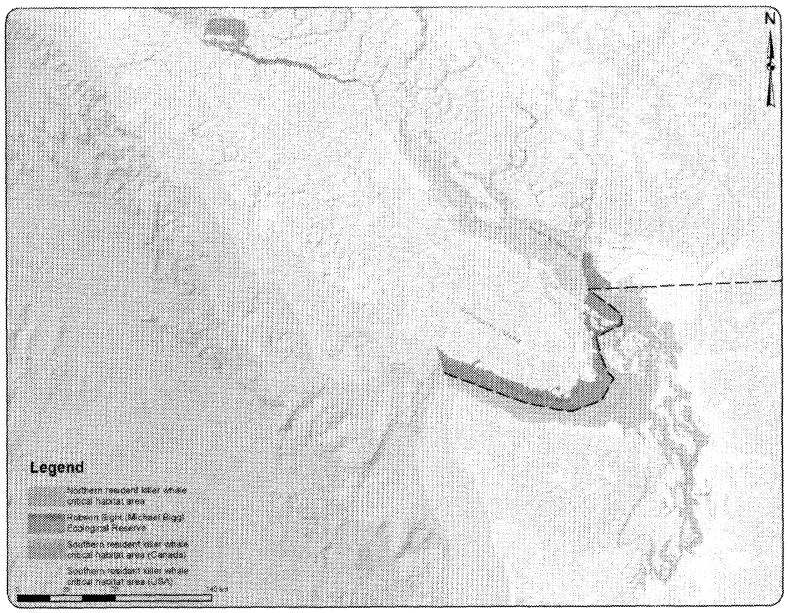
Northern and Southern Resident Killer Whale Critical Habitat



Map Credit: Mariner's Guide

Comment [LR7]: Please use this updated map*

Page Name	00-1-3a: Lightbox Northern and Southern Resident Killer Whale Critical Habitat
Notes for Tech Team	• Clicking on **Southern Resident Killer Whale Critical Habitat** on 00-1-3 opens this lightbox. • Clicking on **X** closes Lightbox. • Map file: SRKW and NRKW Critical Habitat Map.jpg
Feedback/ Revisions	

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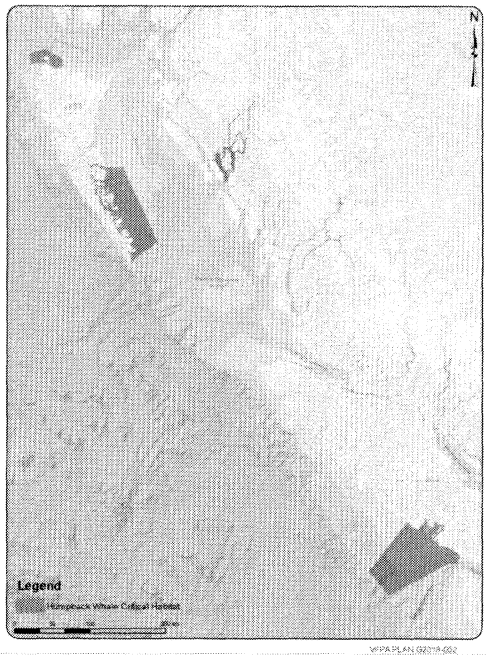
Humpback Whale Important Areas



Map Credit: Mariner's Guide

Page Name	00-1-3b: Lightbox Humpback Whale Critical Habitat
Notes for Tech Team	• Clicking on **Humpback Whale Critical Habitat** opens this lightbox. • Clicking on **X** closes Lightbox. • Map File: Humpback Important Areas Map.jpg
Feedback/ Revisions	

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Killer Whale and Humpback Whale Populations

Photo Credit: Ocean Wise (File: pg.43)

Southern resident killer whales are listed as ~~E~~endangered under SARA and have less than 100* individuals remaining in the population. Seasonally, they spend much of their time in the waters of their critical habit along the south coast of Vancouver Island. (*~~75~~6 individuals as of ~~May~~ July 2018.)

Comment [LR8]: ☹

Northern resident killer whales are listed as threatened under SARA and numbers around 250 individuals. They spend much of their time around their critical habitat during summer months.

Photo Credit: Ocean Wise (File: pg.29)

Humpback whales are listed as Special Concern. The southeast Alaska and northern British Columbia region is estimated to have 3,000-5,000 whales, while the southern B.C. and Washington population is approximately 200-400 whales.

Page Name	00-1-3c: Lightbox Killer Whale and Humpback Whale Populations
Notes for Tech Team	• Clicking on the Killer Whale and Humpback Whale images opens this lightbox. • Clicking on **X** closes Lightbox. • Image source file: Killer Whale – p43 {Rangyn – require source file} • Image source file: Humpback Whale – p29 {Rangyn – require source file}
Feedback/ Revisions	

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Sharing the Ocean

The waters of ~~the eastern North Pacific~~our coast are host to high densities of both cetaceans and marine traffic. Higher marine traffic also means increased potential for physical and acoustic effects on cetaceans.

Some of the key threats to whales in this region include:

- Physical injury or mortality (from vessel collision)
- Physical disturbance (from vessel proximity)
- Acoustic disturbance (from underwater vessel noise)
- Environmental contaminants
- Availability or prey

This training module will focus on physical disturbance and acoustic disturbance from vessels. **Module 4: Best Practices and Navigational Strategies** will discuss navigational best practices for minimizing vessel disturbances.

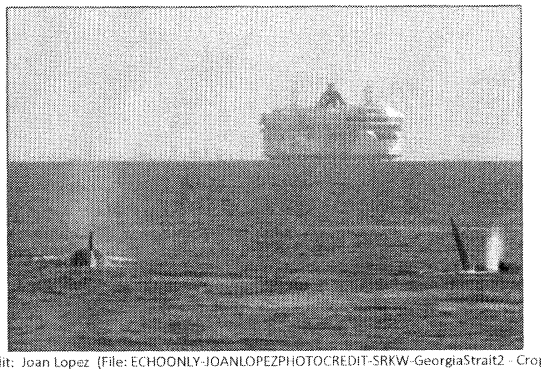

Photo Credit: Joan Lopez (File: ECHOONLY-JOANLOPEZPHOTOCREDIT-SRKW-GeorgiaStrait2 - Cropped.jpg)

To learn more about traffic density off the Pacific Northwest coast, click **here**.

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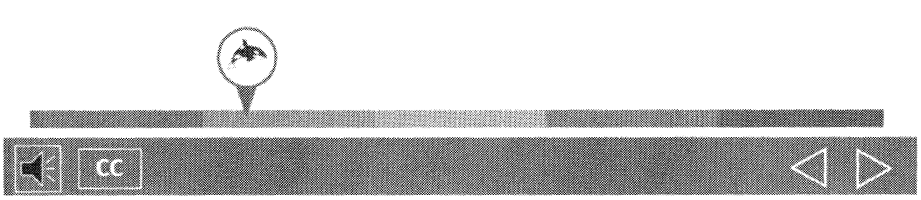

Page Name	00-1-4
Notes for Tech Team	• Clicking on **"Module 4: Best Practices and Navigational Strategies"** open page 00-4-1. • Clicking on "**To learn more about the traffic density off the Pacific and north west coast, click here"** opens Lightbox Page 00-1-4a. • Clicking on Left arrow takes user to Page 00-1-3. • Clicking on Right arrow takes user to Page 00-1-5. • Image source: ECHOONLY-JOANLOPEZPHOTOCREDIT-SRKW-GeorgiaStrait2 - Cropped.jpg
Feedback/ Revisions	

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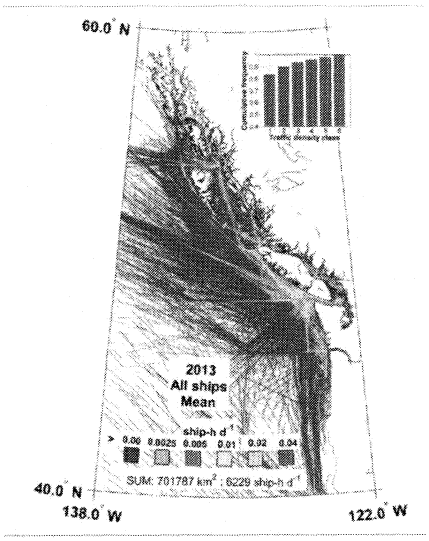
AIS Vessel Traffic Density Off the Pacific North West Coast for 2013



Credit: Mariner's Guide

Traffic density in time and space is visualized in five distinct categories, with dark blue symbolizing zero to very low density, and red symbolizing high density.

This figure (at left)* may be helpful to reference when reviewing the maps of whale abundance as a means of identifying areas where vessels and cetaceans and sea turtles both occur in high density.

Page Name	00-1-4a: Lightbox AIS Vessel Traffic Density Off the Pacific North West Coast for 2013
Notes for Tech Team	• Clicking on "**To learn more about the traffic density off the Pacific and north west coast, click here**" opens this Lightbox. • Clicking on **X** closes Lightbox. • Reference required denoted with *: Simard, Y., Roy, N., Giard, S., and Yayla, M. 2014. Canadian year-round shipping traffic atlas for 2013: Volume 3, West Coast. Can. Tech. Rep. Fish. Aquat. Sci. 3091(Vol.3)E: xviii + 327 pp. • Image file: Mariner's Guide p20. {Rangyn – require source file}
Feedback/ Revisions	• [redacted]

Formatted: French (Canada)

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Whales in our Waters

Physical Effects and Disturbance

Whale populations are vulnerable to physical effects (e.g., injury and mortality) and general disturbance by vessels. In small populations like the southern resident killer whales, these impacts on individuals can have population-level effects*.

Risk of Collision – Whales are vulnerable to being struck and injured or killed by vessels. Vessel propeller strikes also occur when the whale is submerged and a propeller suction effect can pull a whale towards the stern of the vessel**.

Vessel strikes are a recognized cause of mortality for a variety of cetaceans, many of which are found in our waters. ***

Photo Credit: Souffleurs D'Ecume

Did you know that vessels over 80 meters long, travelling faster than 14 knots, are the most likely to kill cetaceans in the event of a strike? Smaller vessels travelling at faster speeds are likely to cause significant vessel damage and human injury as well.

Physical disturbance by large and small vessels may disrupt behaviours and activities important for survival such as foraging, feeding, socializing and breeding.

Understanding the distribution of cetaceans helps identify and map high-risk areas for vessel strikes. A significant portion of these valuable data come from sightings reported by mariners on the water. Reporting best practices will be shown in **Module 5: Reporting Best Practices.**

Click here to see how your vessel compares to a whale.

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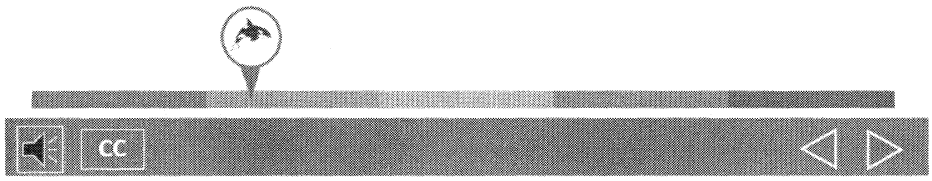

Page Name	00-1-5
Notes for Tech Team	• Clicking whale icon reveals coloured bar and fun fact. • Clicking on **Click here to see how your vessel compares to a whale** opens Lightbox Page 00-1-5a. • Clicking on Left arrow takes user to Page 00-1-4 • Clicking on Right arrow takes user to Page 00-1-6 • Clicking on **Module 5: Reporting Best Practices** takes user to Page 00-5-1. • Reference for *: Robert C. Lacy, Rob Williams, Erin Ashe, Kenneth C. Balcomb III, Lauren J. N. Brent, Christopher W. Clark, Darren P. Croft, Deborah A. Giles, Misty MacDuffee & Paul C. Paquet. Evaluating anthropogenic threats to endangered killer whales to inform effective recovery plans. *Scientific Reports,* Volume 7:14119(2017). *doi:10.1038/s41598-017-14471-0* • Reference for **: Silber, G. K., J. Slutsky, and S. Bettridge.2010. Hydrodynamics of a ship/whale collision. Journal of Experimental Marine Biology and Ecology 39: 10–19. • Reference for *** (there are 2 references): o Jensen, A.S. and G.K. Silber. 2003. Large Whale Ship Strike Database. U.S. Department of Commerce, NOAA Technical Memorandum, NMFS-OPR, 37 pp. o Laist, D.W., Knowlton, A.R., Mead, J.G., Collet, A.S., & Podesta, M. (2001). Collisions between ships and whales. Marine Mammal Science 17(1), 35-75. • Image file: Mariner's Guide p.11 {Rangyn – we will need the source file and permission to use this photo}
Feedback/ Revisions	

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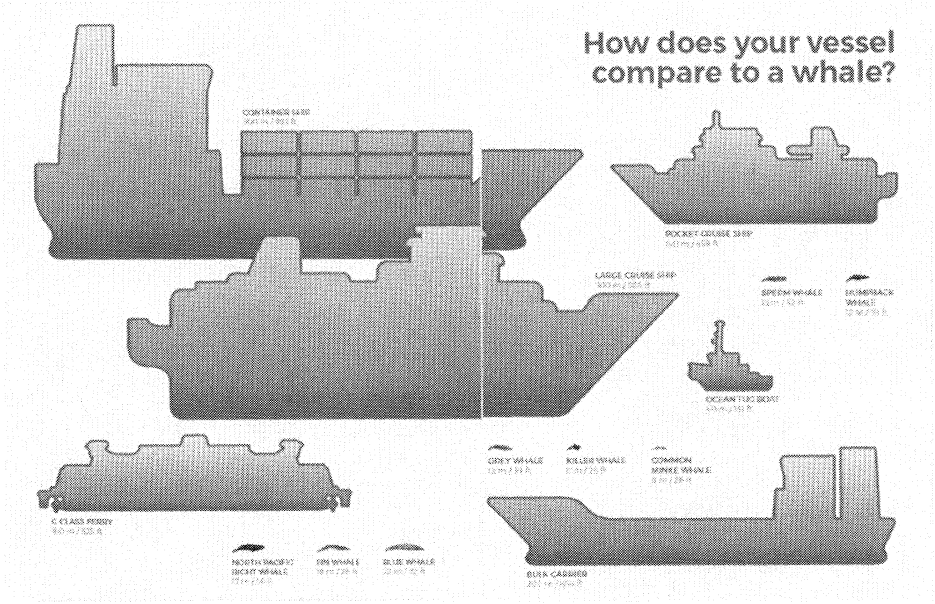
How does your vessel compare to a whale?



Credit: Mariner's Guide

Page Name	00-1-5a: Lightbox How does your vessel compare to a whale?
Notes for Tech Team	• Clicking on "**Click here to see how your vessel compares to a whale**" opens this Lightbox. • Clicking on **X** closes Lightbox. • Image file: Mariner's Guide p. 24 and 25 {Rangyn – we will need the source file}
Feedback/ Revisions	

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Whales in our Waters

Acoustic Disturbance

In the North Pacific Ocean, underwater noise has doubled in intensity every decade for the past 60 years.* Motorized vessels contribute to underwater noise and may cause behavioural disturbances and increased stress levels which can reduce the ability of whales to detect prey, communicate, navigate, rest, avoid danger, mate and care for their young.**.

The amount of noise produced by a vessel depends on its operational design, maintenance and machinery characteristics. Most of the noise vessels produce is generated by propeller cavitation and on board machinery which propagate at low frequencies and can travel thousands of kilometers underwater.***.

Listen to these northern resident killer whales near Hanson Island, B.C****.
Can you hear the vessel noise? Can you still hear the whales?

Audio Credit: OrcaLab

Now listen to various natural and human-made noise sources below.

Bulker Tanker Fishing Boat Humpbacks Killer Whale

Audio Credit: Echo and JASCO Applied Sciences

To learn more about cavitation, watch this 3 minute video by National Geographic.

Congratulations - you have completed Module 1!
Move forward to complete a short quiz to test your understanding of the concepts presented in this module.

001543

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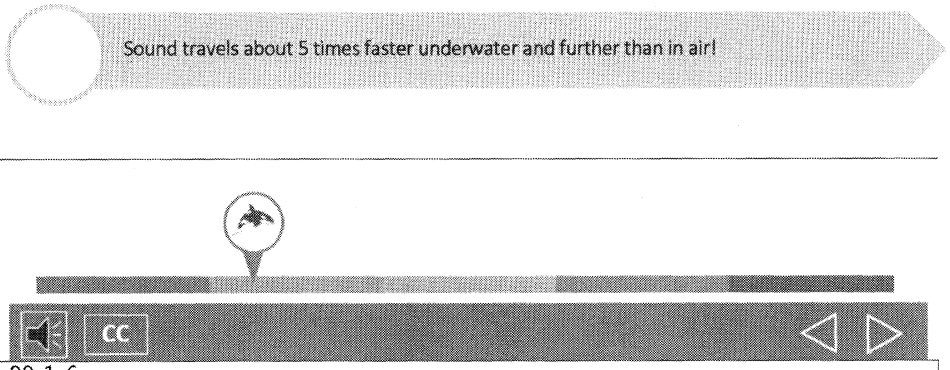

Page Name	00-1-6
Notes for Tech Team	• Clicking the whale icon reveals coloured bar and fun fact. • Clicking the sound icon (Orca Lab) will play the sound clip - Northern resident killer whales with boat noise - Hanson Island, BC - Orcalab credit.mp3 • Clicking the video icon will play the video found here: https://www.youtube.com/watch?v=ON_rzFAU9c • Clicking the sound icon will open the corresponding clip: o Bulker: Bulker - Edited 10 seconds.mp3 o Fishing Boat - Fishing Boat - Recorded from ECHO ULS - January 11, 2016 (mp3cut.net).mp3 o Humpbacks - Humpbacks -Recorded from ECHO ULS - December 25, 2015 (4seconds).mp3 o Killer Whale - Killer Whale - Recorded from ECHO ULS - October 4,2015.mp3 o Tanker Sound - Tanker Sound - Recorded from ECHO ULS - Dec 26, 2015 (mp3cut.net).mp3 • Clicking on Left arrow takes user to Page 00-1-5 • Clicking on Right arrow takes user to Page 00-2-1 • Reference for *: Hildebrand, J. (2009). Anthropogenic and natural sources of ambient noise in the ocean. Marine Ecological Progress Series, 395, 5-20. • Reference for **: Heise, K.A., Barrett-Lennard, L.G., Chapman, N.R., Dakin, D.T., Erbe, C., Hannay, D.E., Merchant, N.D., Pilkington, J.S., Thornton, S.J., Tollit, D.J., Vagle, S., Veirs, V.R., Vergara, V., Wood, J.D., Wright, B.M., Yurk, H. 2017. Proposed Metrics for the Management of Underwater Noise for Southern Resident Killer Whales Coastal Ocean Report Series (2), Ocean Wise, Vancouver, 31pp. • Reference for ***: Nolet, V. 2017. Understanding Anthropogenic Underwater Noise. Report Number TP 15348 E. Prepared for Transportation Development Centre of Transport Canada By Veronique Nolet, Green Marine Management Corporation. 106 pp. https://www.tc.gc.ca/eng/anthropogenic-underwater-noise.html • Reference for ****: Paul Spong, OrcaLab. http://orcalab.org/
Feedback/ Revisions	

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Quiz Questions

*To be determined once module content finalized. [John – there will be a separate storyboard provided later this month titled "Assessment and Resources".]

Glossary

*[John – the client identified the need to have both Canadian and USA definitions for some of these terms which is why they are so lengthy.]

Term	Definition
AIS	Automatic Identification System
Cavitation	The rapid formation of vapour or gas-filled cavities (e.g., bubbles) in a flowing liquid as a result of mechanical force, such as from a vessel propeller. This can account for 80-85% of the noise from a vessel.
Cetacean	Cetaceans include whales, dolphins, and porpoises. The cetacean order of marine mammals (Cetacea) include the toothed whales (odontocetes) and baleen whales (mysticetes).
Critical Habitat	"Critical habitat" is defined under the *Species at Risk Act* (SARA) as "the habitat that is necessary for the survival or recovery of a listed wildlife species that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species". SARA makes it illegal to destroy critical habitat of species at risk (e.g., through acoustic degradation). "Critical habitat" under the U.S. *Endangered Species Act* specifies areas that are: - within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection. - outside the geographical area occupied by the species if it is determined that the area itself is essential for conservation.
Endangered	Canadian *Species at Risk Act* 'Endangered' Definition: Species facing imminent extirpation or extinction. U.S. *Endangered Species Act* 'Endangered' Definition: Species that are in danger of extinction throughout all or a significant portion of their range.
Extirpated	Species that no longer exist in the wild in Canada, but exist elsewhere in the wild.
Special Concern	Canadian *Species at Risk Act* 'Special Concern' Definition: Species which may become threatened or endangered because of a combination of biological characteristics and identified threats.

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Species at Risk Act **(SARA)**	The *Species at Risk Act* (SARA) is a piece of Canadian federal legislation. SARA was created to prevent Canadian indigenous species, subspecies, and distinct populations from becoming extirpated or extinct, to provide for the recovery of endangered or threatened species, and encourage the management of other species to prevent them from becoming at risk.
Threatened	Canadian *Species at Risk Act* 'Threatened' Definition: Species which are likely to become endangered if nothing is done to reverse the factors leading to their extirpation or extinction. U.S. *Endangered Species Act* 'Threatened' Definition: Species that are likely to become endangered in the foreseeable future.

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s.16(2)
s.21(1)(a)
s.21(1)(b)
s.23

Wong, Eva

From: Stewart, Julie
Sent: August-08-18 3:04 PM
To: Legault, Josee (DOJ)
Cc: Brekke, Heather; Davis, Neil; Busby, Corina; Makkay, Kristina
Subject:
Attachments:

Importance: High

Josee:

Julie Stewart
Director / Directrice
Species at Risk Program / Programme des Espèces en Péril
200 rue Kent St.
Station 10W061
Ottawa, ON
K1A 0E6

(613) 949-7524 (t)
(613)

Julie.stewart@dfo-mpo.gc.ca

From: Busby, Corina
Sent: Wednesday, August 8, 2018 4:47 PM
To: Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>
Subject:

Pages 1548 to / à 1642

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

s.21(1)(a)

s.21(1)(b)

s.23

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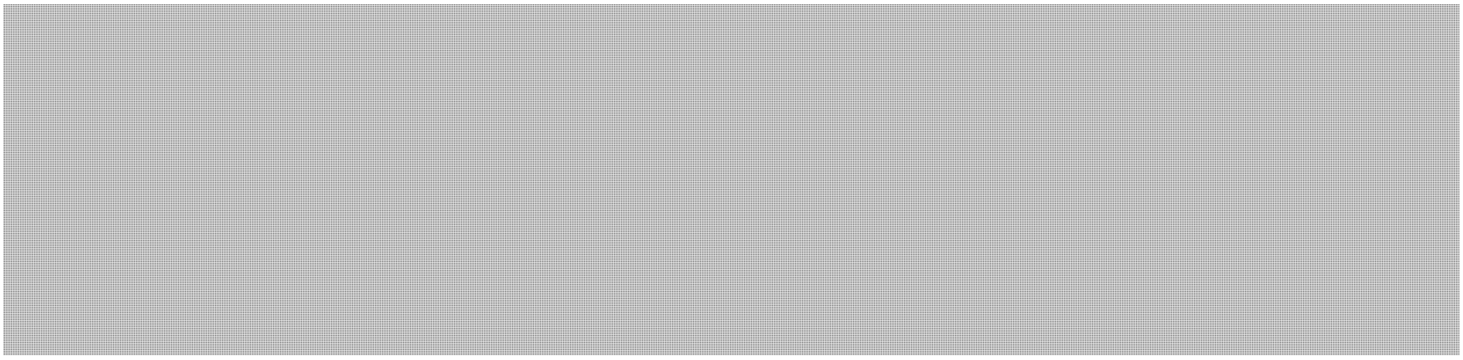
Dozie, Juachi

From: Brekke, Heather
Sent: August-08-18 9:07 AM
To: Stewart, Julie
Subject: FW: For review - additional suggested edits to the RKW amended RS
Attachments: For review - Suggested edits_RKW aRS_TDV.docx

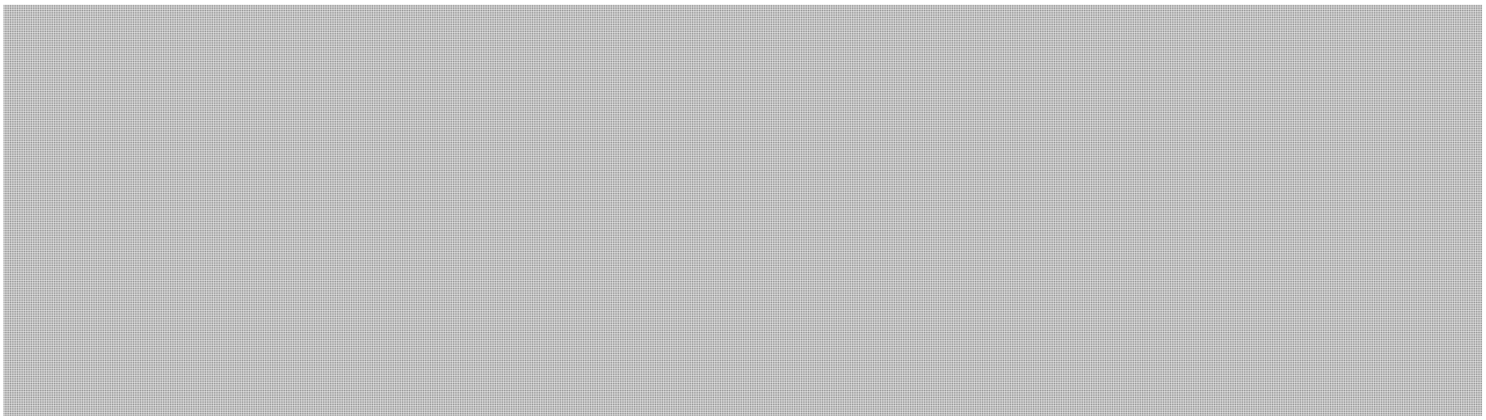
From: Brekke, Heather
Sent: August-08-18 8:57 AM
To: Busby, Corina
Subject: FW: For review - additional suggested edits to the RKW amended RS



Thanks
Heather

From: Doniol-Valcroze, Thomas
Sent: August-08-18 8:20 AM
To: McMillan, Christie; Ford, John K; Thornton, Sheila
Cc: Brekke, Heather
Subject: RE: For review - additional suggested edits to the RKW amended RS

Hi,



Best,

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s.21(1)(a)

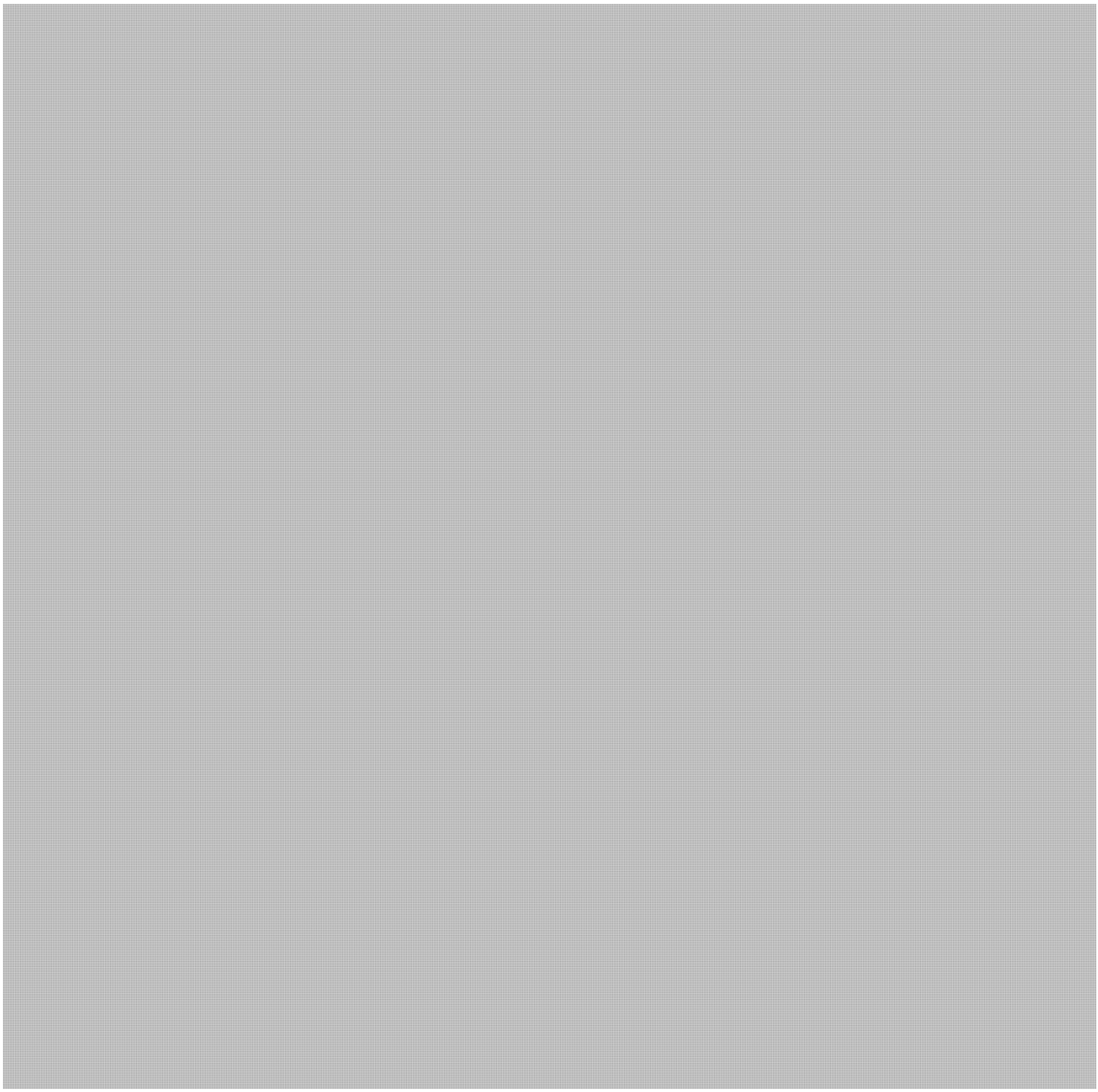
s.21(1)(b)

Thomas

s.23

De : McMillan, Christie
Envoyé : 7 août 2018 18:17
À : Ford, John K; Thornton, Sheila; Doniol-Valcroze, Thomas
Cc : Brekke, Heather
Objet : For review - additional suggested edits to the RKW amended RS

Hi all,



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[redacted]

Cheers,

Christie

Christie McMillan
Species At Risk Recovery Planner
Fisheries and Oceans Canada
604-666-4775
Christie.McMillan@dfo-mpo.gc.ca

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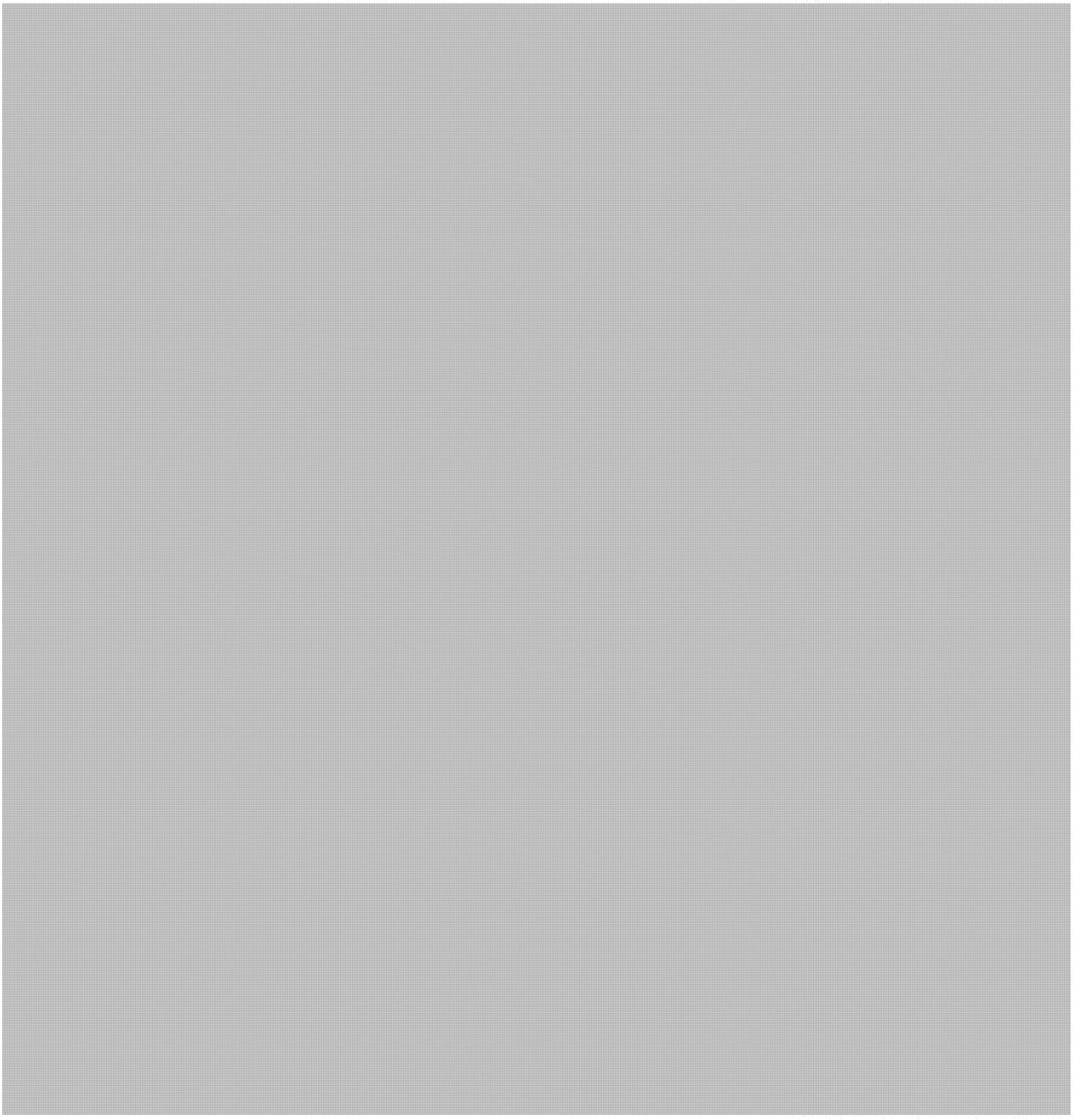
s.21(1)(a)

s.21(1)(b)

s.23

Geographic information (p.58)



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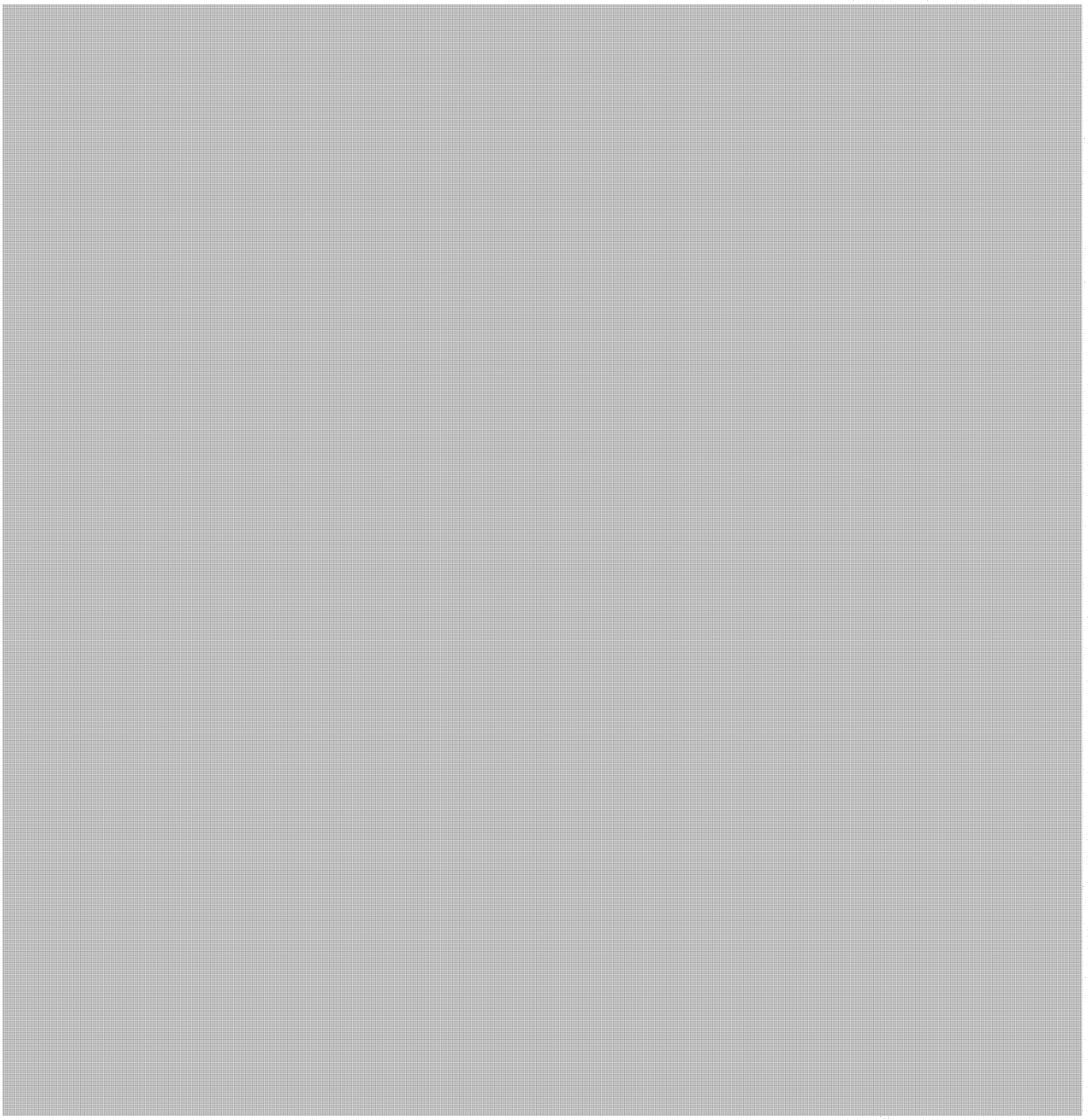
s.21(1)(a)

s.21(1)(b)

s.23



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Khanna, Sukriti

From: Brekke, Heather
Sent: August-08-18 12:19 PM
To: Govender, Rhona; Jones, Lisa Ann; Lee, Tatiana; McMillan, Christie; Shaikh, Sharlene
Cc: Wells, Caroline
Subject: FW: SRKW Imminent Threat Assessment posted

FYI, in case you didn't already receive this.

From: Leslie, Karen
Sent: July-30-18 7:35 AM
To: Leslie, Karen
Subject: SRKW Imminent Threat Assessment posted

FYI and for distribution as required. The full Southern Resident Killer Whale Imminent Threat Assessment is now posted to the SAR Public Registry (previously only the assessment summary was available). NHQ Comms has developed Media Lines. Notifications to registry subscribers will be sent out soon.

https://www.registrelep-sararegistry.gc.ca/document/default_e.cfm?documentID=3327

Cheers,
Karen

Karen Leslie
Regional Manager, Species at Risk Program
Fisheries and Oceans Canada / Government of Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

Gestionnaire régional, Programme des espèces en péril
Pêches et Océans Canada / Gouvernement du Canada
Karen.Leslie@dfo-mpo.gc.ca / 604-666-0395

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Wong, Eva

From: Busby, Corina
Sent: August-08-18 2:34 PM
To: Brekke, Heather
Subject: AES for August 6 SAR.docx
Attachments: AES for August 6 SAR.docx

Hi Heather
Not sure about your tab in the black binder but we included the attached re. the approval of the aRS and upcoming consultation period in the Aug 6 update for the Tab we are asked to provide input into.
You might wish to include something in your binder this week with more information on the consultations. We focused on sensitizing MinO on the timing for approval for the aRS.
Corina

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TAB 10 - UPCOMING ISSUES AND DECISIONS / ONGLET 10 – PROCHAINS ENJEUX ET DÉCISIONS

SECRET

#	ISSUE /PROBLÈME	DESCRIPTION	IMPACT / EFFET	NEXT STEPS / STATUS PROCHAINES ÉTAPES / SITUATION
Aquatic Ecosystems Sector / Secteur des écosystèmes aquatiques – August 6th to August 17th / du 6 août au 17 août				
1	[redacted]			
2	**Approval and Publication of the amended Recovery Strategy for Resident Killer Whales**	The 2011 Recovery Strategy for the Northern and Southern Resident Killer Whales is being amended to include two additional areas of special importance as proposed critical habitat (CH) for Resident Killer Whales. The amendment also provides clarification of the functions, features and attributes for all critical habitat identified for Resident Killer Whales. DFO Pacific region conducted a 30-day online external review on the draft amended Recovery Strategy (aRS) from	Publication of this proposed aRS identifying new CH for RKS and allowing for its protection under the Species at Risk Act is a significant step forward in addressing the imminent threats to survival and recovery for SRKW and it is an action identified in the call for an Emergency Order for SRKW protection.	Once approved by the Minister the aRS will be posted to the SAR Public Registry for a 60d national public consultation period. The Department will promote the consultation opportunity to key Indigenous groups and stakeholders through direct notifications, through the SAR

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TAB 10 - UPCOMING ISSUES AND DECISIONS / ONGLET 10 – PROCHAINS ENJEUX ET DÉCISIONS

#	ISSUE /PROBLÈME	DESCRIPTION	IMPACT / EFFET	NEXT STEPS / STATUS PROCHAINES ÉTAPES / SITUATION
		June 12 – July 11, 2018. Over 700 responses to the external review were received; all feedback was considered but did not result in substantive changes to the document as the majority addressed concern with the process (e.g., consultation timing and timelines, uncertainty with respect to socio-economic impacts or Indigenous rights, misunderstanding of the implications to fisheries on designation of additional areas of CH) but did not provide additional information or data which resulted in changes to the proposed CH. The program is working under extremely tight timelines in order to publish the final amended Recovery Strategy by late November 2018 (as communicated to Ecojustice) and enact a Critical Habitat Order by December 2018 for the protection of the SRKW. To meet these deadlines, Minister's approval of the proposed amended Recovery Strategy is required by August 10th, 2018 so it can be posted to the SAR Public Registry by August 17th for the 60d review period.		and through social media to ensure that all interested parties have an opportunity to provide input. Following the 60d consultation period, changes, as/if required will be made to the aRS and it will be posted of the registry as final (late November 2018). Shortly following this publication, which officially designates the additional areas as CH for the RKW, it is anticipated that a CHO will be established for its protection (December 2018).
3				

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TAB 10 - UPCOMING ISSUES AND DECISIONS / ONGLET 10 – PROCHAINS ENJEUX ET DÉCISIONS				SECRET
#	ISSUE /PROBLÈME	DESCRIPTION	IMPACT / EFFET	NEXT STEPS / STATUS PROCHAINES ÉTAPES / SITUATION

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Khanna, Sukriti

From: Harber, Lee
Sent: August-08-18 12:45 PM
To: Cottrell, Paul
Subject: RE: NOAA Media Briefing Summary

Ok good. nice job on the briefing!

From: Cottrell, Paul
Sent: 2018–August-08 12:24 PM
To: Harber, Lee; Davis, Neil; Thomson, Andrew; Burns, Adam; Jenkins, Randy; Moore, Kendra; Scott, Paul G
Subject: Re: NOAA Media Briefing Summary

Great summary Lee!

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Harber, Lee
Sent: Wednesday, August 8, 2018 12:18 PM
To: Davis, Neil; Thomson, Andrew; Burns, Adam; Jenkins, Randy; Moore, Kendra; Scott, Paul G; Cottrell, Paul
Subject: NOAA Media Briefing Summary

Hi everyone,

Here is what I gathered from the 1 hour media briefing call at 10AM PST this morning. Paul – if you have any corrections please advise asap.

==========

The media briefing session was chaired by Jim Milbury (NOAA – Public Information Officer)

Reporters' questions we mostly around the process for permitting to allow the U.S. to administer antibiotics and medication J50 in Canadian waters and how quickly this can be accomplished. There were also other questions about treatment options being considered, direction the whales are heading, how DFO and NOAA are working together, and 1 question on J35 and her health.

Panel included:
Paul Cottrell (DFO – Marine Mammal Coordinator) and Lynn Barre (NOAA Fisheries Recovery Coordinator) & Sheila Thornton (DFO – Scientist)

Summary of key points from panelists:

- Despite very challenging conditions (i.e. fog, choppy water) DFO research vessel was able to spot J50 yesterday at 3:52PM with its mother, both exhibiting regular resting behaviour.

- NOAA, in collaboration with DFO, is using best available science, gathering new information i.e. photogrammetry, and input from marine mammal experts (including veterinarians) in order to develop treatment options.

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- NOAA is in the process of preparing an application for permitting that will enable them to administer antibiotics and medication to J50 in Canadian waters.
    - A key piece of information will be the breath and faecal sampling from J50, for which there is already an approved permit for allowing this sampling by the US in Canadian waters. This sampling will be conducted at the next most appropriate opportunity by NOAA i.e. When J50 is spotted again and it will not cause any major disturbance to the family.

- NOAA has submitted an internal analysis for approvals, which has been shared with DFO for information. DFO and NOAA are working together very closely.
    - Once NOAA has completed its analysis, it will submit a permit to DFO for review and approval.
    - DFO science will review and evaluate the application and assess any risks e.g. risks to other members of the whale family who could be disturbed by interventions.

- To date, J50 has only been characterized as being in a state of malnutrition (i.e. J50 has not been diagnosed with any disease or infection). The antibiotic that is being proposed is a general prophylactic that could help with a broad spectrum of health issues.

Next Steps:

- DFO and NOAA research vessels are on the water today and if they locate J50 and there is an appropriate opportunity, they will attempt to take a breath / faecal sample. This is a key sample that will inform treatment options and NOAA application.
- NOAA will continue to prepare the application for the permit to treat J50 in Canadian waters.

NOAA Website for J50 and J35:

http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/updates-j50-j35.html

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-08-18 1:09 PM
To: Cottrell, Paul; Harber, Lee; Davis, Neil; Thomson, Andrew; Burns, Adam; Jenkins, Randy; Scott, Paul G
Subject: RE: NOAA Media Briefing Summary

Great, thanks for that clarification Paul. I was looking to confirm the specific permitting information they hold for the health assessments that were conducted on J50.

Thanks,

Kendra

From: Cottrell, Paul
Sent: August-08-18 4:07 PM
To: Moore, Kendra; Harber, Lee; Davis, Neil; Thomson, Andrew; Burns, Adam; Jenkins, Randy; Scott, Paul G
Subject: Re: NOAA Media Briefing Summary

Hi Kendra,
NOAA doesn't have a SARA or section 52 licence for research in Canada for the pole mount or darting of SRKW with antibiotic. This is a new method which has never been conducted before. An application will have to submitted. NOAA has specific SARA and Section 52 licences for specific projects they conduct. Also Brad Hansen with NOAA was added onto a DFO licence for photo ID work. Let me know.
Cheers,
Paul
Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Moore, Kendra
Sent: Wednesday, August 8, 2018 12:44 PM
To: Harber, Lee; Davis, Neil; Thomson, Andrew; Burns, Adam; Jenkins, Randy; Scott, Paul G; Cottrell, Paul
Subject: RE: NOAA Media Briefing Summary

Hi Lee,

Thanks for the update. Can you confirm that the permit that NOAA currently holds is a section 52 under the Fisheries General Regulations and a section 73 under SARA?

Thanks,

Kendra

From: Harber, Lee
Sent: August-08-18 3:19 PM
To: Davis, Neil; Thomson, Andrew; Burns, Adam; Jenkins, Randy; Moore, Kendra; Scott, Paul G; Cottrell, Paul
Subject: NOAA Media Briefing Summary

Hi everyone,

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==========

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- NOAA, in collaboration with DFO, is using best available science, gathering new information i.e. photogrammetry, and input from marine mammal experts (including veterinarians) in order to develop treatment options.

- NOAA is in the process of preparing an application for permitting that will enable them to administer antibiotics and medication to J50 in Canadian waters.
    - A key piece of information will be the breath and faecal sampling from J50, for which there is already an approved permit for allowing this sampling by the US in Canadian waters. This sampling will be conducted at the next most appropriate opportunity by NOAA i.e. When J50 is spotted again and it will not cause any major disturbance to the family.

- NOAA has submitted an internal analysis for approvals, which has been shared with DFO for information. DFO and NOAA are working together very closely.
    - Once NOAA has completed its analysis, it will submit a permit to DFO for review and approval.
    - DFO science will review and evaluate the application and assess any risks e.g. risks to other members of the whale family who could be disturbed by interventions.

- To date, J50 has only been characterized as being in a state of malnutrition (i.e. J50 has not been diagnosed with any disease or infection). The antibiotic that is being proposed is a general prophylactic that could help with a broad spectrum of health issues.

Next Steps:

- DFO and NOAA research vessels are on the water today and if they locate J50 and there is an appropriate opportunity, they will attempt to take a breath / faecal sample. This is a key sample that will inform treatment options and NOAA application.
- NOAA will continue to prepare the application for the permit to treat J50 in Canadian waters.

NOAA Website for J50 and J35:

http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/updates-j50-j35.html

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Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

s.19(1)

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Khanna, Sukriti

From: Kristin Wilkinson - NOAA Federal <[redacted]>
Sent: August-08-18 8:44 AM
To: Cottrell, Paul
Cc: Thornton, Sheila; Lynne Barre; Teri Rowles; Sarah Wilkin - NOAA Federal; brad.hanson
Subject: Re: Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50

Paul,

Medications and dosages are noted on page 12 of the plan, this is currently incorrectly placed in phase 3 at this point in time. We have provided comments and suggestions for the plan to be modified this morning. Our NOAA license for the activities is the permit and is not specific to drugs and dosages. Each veterinarian involved and Brad Hanson has a Co-Investigator letter under the permit to conduct specific activities such as sample collection, providing medical treatment, etc. Is the authorization for breath samples in Canada limited to 20m or is a closer approach allowed? Brad needs to be within 5m to collect the sample.

Thanks,

Kristin

On Wed, Aug 8, 2018 at 8:13 AM, Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca> wrote:
Hi Kristin,
I don't see the pole and darting antibiotic methodology, antibiotic type and dosage described, is there a separate document/proposal outlining this activity. If so, please send so we can do up a licence. It would be great if you had a copy of your NOAA licence for this activity for reference, thanks so much!
The activities to collect health assessment information (eg fecal and breath samples) are licenced in Canada. The supplemental chinook feeding and use as a mechanism for medication treatment has not been licenced in Canada. There has not been a request to do this in Canadian waters. Is the whale sanctuary applying to do this in Canadian waters? We have not received a request. We will be reviewing this recent updated proposal/document on chinook feeding in anticipation of a request.
Thanks so much,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

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From: Kristin Wilkinson - NOAA Federal
Sent: Wednesday, August 08, 2018 6:51 AM
To: Thornton, Sheila; Cottrell, Paul
Cc: Lynne Barre; Teri Rowles; Sarah Wilkin - NOAA Federal
Subject: Fwd: Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50

Sheila and Paul,

We have received a revised proposal from The Whale Sanctuary Project. The updated version is attached here.

In summary, providing temporary nutritional support of J50 would be done first through a live fish release trial by one vessel and through a chute in the vicinity of J50, likely 50-100 yards in the front of her path. If she does take live fish then the next step will be taken to provide oral medications in the fish such as antibiotics and an anti fungal. This drug combination would address a range of bacterial infections J50 is susceptible to.

I apologize that I was not on the call yesterday. I am in the San Juans and spent the entire day with the core response team in discussions of this proposal and outlining future response goals.

Kristin
---------- Forwarded message ----------
From: **Katy Foster** <
Date: Tue, Aug 7, 2018 at 10:06 PM
Subject: Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50
To: Lynne Barre - NOAA Federal <, Teri Rowles <
Kristin Wilkinson - NOAA Affiliate
Cc: "Hendrik.Nollens@SeaWorld.com" jeff foster
<, Deborah Giles < Joseph Karl Gaydos
, Martin Haulena <, Brad Hanson
<, Candice Emmons - NOAA Federal Sam Wasser

Hi Everyone -

Attached is a finalised Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50.

All the best,
Jeff & Katy Foster

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division

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West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

--

Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

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Khanna, Sukriti

From: Davis, Neil
Sent: August-08-18 10:26 AM
To: Cottrell, Paul; Thomson, Andrew
Cc: Lowe, Carmel; Thornton, Sheila; Harber, Lee; Girouard, Louise
Subject: RE: Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50

Thanks Paul,

I'd like to convene a discussion today to summarise our assessment of these proposals and determine which we are supportive of (or not) and the rationale, so that we can start pulling together a summary for decision makers and ultimately prepare updated media lines that reflect our views. We will also need to discuss the appropriate channels for communicating back to NOAA, likely at a technical and more snr mgmt. level.

I believe that both you and Sheila are in the field. When is the soonest you can you be available, and is there anyone else from Science we should include?

Thx
Neil

> **From:** Cottrell, Paul
> **Sent:** Wednesday, August 8, 2018 7:48 AM
> **To:** Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
> **Cc:** Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>
> **Subject:** FW: Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50
>
> Hi All,
> Latest proposal on NOAA and partner activities related to chinook feeding trials fyi.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

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From: Kristin Wilkinson - NOAA Federal [redacted]
Sent: Wednesday, August 08, 2018 6:51 AM
To: Thornton, Sheila; Cottrell, Paul
Cc: Lynne Barre; Teri Rowles; Sarah Wilkin - NOAA Federal
Subject: Fwd: Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50

Sheila and Paul,

We have received a revised proposal from The Whale Sanctuary Project. The updated version is attached here.

In summary, providing temporary nutritional support of J50 would be done first through a live fish release trial by one vessel and through a chute in the vicinity of J50, likely 50-100 yards in the front of her path. If she does take live fish then the next step will be taken to provide oral medications in the fish such as antibiotics and an anti fungal. This drug combination would address a range of bacterial infections J50 is susceptible to.

I apologize that I was not on the call yesterday. I am in the San Juans and spent the entire day with the core response team in discussions of this proposal and outlining future response goals.

Kristin
---------- Forwarded message ----------
From: **Katy Foster** [redacted]
Date: Tue, Aug 7, 2018 at 10:06 PM
Subject: Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50
To: Lynne Barre - NOAA Federal [redacted], Teri Rowles [redacted] Kristin Wilkinson - NOAA Affiliate [redacted]
Cc: [redacted], jeff foster [redacted], Deborah Giles [redacted] Joseph Karl Gaydos [redacted] Martin Haulena [redacted], Brad Hanson [redacted] Candice Emmons - NOAA Federal [redacted], Sam Wasser [redacted]

Hi Everyone -

Attached is a finalised Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50.

All the best,
Jeff & Katy Foster

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office

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[redacted] Cell

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Khanna, Sukriti

From: Girouard, Louise
Sent: August-08-18 6:25 PM
To: Davis, Neil; Thomson, Andrew; Thornton, Sheila; Cottrell, Paul
Cc: Malikian, Janine; Bate, Dan; Lowe, Carmel; McElhone, Kathryn; Smith, Kathleen
Subject: RE: URGENT: NOAA - spokes for tomorrow media call at 10:00 PST

Ok - Sending media invite shortly for 9 am with call-in information.

Stay tuned,

L

From: Davis, Neil
Sent: Wednesday, August 8, 2018 6:23 PM
To: Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>; Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Cc: Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.Mcelhone@dfo-mpo.gc.ca>; Smith, Kathleen <Kathleen.Smith@dfo-mpo.gc.ca>
Subject: Re: URGENT: NOAA - spokes for tomorrow media call at 10:00 PST

We have the regular srkw ops mtg at 930, can we do 9 instead?

Sent from my BlackBerry 10 smartphone on the Rogers network.

From:
Girouard,
Louise
Sent:
Wednesday,
August 8,
2018 4:46
PM
To:
Thomson,
Andrew;
Davis, Neil;
Thornton,
Sheila;
Cottrell,
Paul
Cc:
Malikian,
Janine;
Bate, Dan;
Lowe,
Carmel;
McElhone,
Kathryn;
Smith,
Kathleen

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Subject:
URGENT:
NOAA -
spokes for
tomorrow
media call
at 10:00
PST

Thank you for all your collaboration with respect to ensuring that DFO participates on the daily media updates regarding J50 and J35.

For tomorrow's call, we would like to propose the following spokespersons:

Status of licensing, Proposal from NOAA, Additional measures DFO is taking to protect SRKW
Andrew Thomson

Condition of J50, Science, Obligations under SARA
Sheila Thornton, Lead Killer Whale Research Scientist, 604-364-5917

Monitoring for J-pod, mechanics of the operations once we are able to intervene
Paul Cottrell, Marine Mammal Coordinator, 604-666-9965

If all of you are available I would like to arrange a short coordination call at 9:30 to allow us to discuss the latest developments and updated messaging.

L

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Khanna, Sukriti

From: Girouard, Louise
Sent: August-08-18 12:09 PM
To: Davis, Neil
Cc: Cottrell, Paul; Thornton, Sheila; Malikian, Janine
Subject: FW: Endangered orca that sparked international rescue plan spotted in B.C....

Hi Neil,
First of the articles from the media briefing this morning,

Paul and Sheila thanks for helping us clarify the issues around licensing requirements in Canada - I think CP did a good job at explaining it below.

We are working on media lines which should be coming your way for approvals.

L

-----Original Message-----
From: Command News <fp.NEWS.LGIROUARD@commandnews.com>
Sent: Wednesday, August 8, 2018 11:53 AM
To: Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
Subject: Endangered orca that sparked international rescue plan spotted in B.C....

Profile: LGIROUARD / My Drawer / DFO - Clip 2 (limit 100) Aug 08 2018 14:53:00 - Source: ENV [The Canadian Press]

Endangered orca that sparked international rescue plan spotted in B.C. waters (Whale-Rescue) VANCOUVER _ An emaciated and endangered killer whale that scientists feared could be dead has been spotted swimming in the waters off Vancouver Island.

Paul Cottrell of Fisheries and Oceans Canada says a federal research team saw J50 Tuesday afternoon near Port Renfrew, B.C., but conditions were so foggy that they couldn't assess her condition.

The young female orca has sparked an international rescue effort by Canadian and American scientists who have developed a novel plan to feed her **>salmon<** medicated with antibiotics.

J50 is one of only 75 Southern resident killer whales that swim the coastal waters between British Columbia to California.

As a female with reproductive potential, scientists say she could play a vital role in her species' recovery if she survives.

While the **>salmon<**-feeding idea has not yet received approval from Canadian officials, Cottrell says Canada is prepared to give the green light to a plan to administer antibiotics by dart or with a pole-mounted syringe, once it receives an application from its American counterparts.

The first step before administering any antibiotics will be to assess J50's condition, once she is located again in appropriate conditions.

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``In terms of the licensing for the pole-mounted antibiotic injection or the darting mechanism ... the activity from scientists has been approved, but we still need the application from the individuals, the researchers, the experts who want to undertake this,'' Cottrell said.

Sheila Thornton, a research scientist with Fisheries and Oceans Canada, says J50 was spotted with her mother but she could not say what direction they are travelling.

Thornton says weather conditions looked better Thursday, so they were hoping for another sighting in order to collect fecal and breath samples from J50.

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Khanna, Sukriti

From: Girouard, Louise
Sent: August-08-18 4:12 PM
To: Davis, Neil; Thomson, Andrew; Lowe, Carmel
Cc: Cottrell, Paul; Reid, Rebecca
Subject: FW: J50 - sighting update today

This tweet has been issued:

DFO Pacific @DFO_Pacific · 1m
Our marine mammal experts have sighted #KillerWhale J50 and her mother J16 in US waters. J35 is with this pod and is still carrying her calf. We are continuing to work with @NOAAFish_WCRO and other partners to monitor the situation. ow.ly/MgWO30lkq0p

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MPO Pacifique @MPO_Pacifique · 1m
Nos experts ont observé l'#épaulard J50 et sa mère, j16 dans les eaux des É.-U. J35 est avec ce groupe et porte toujours son baleineau. Nous poursuivons la collaboration avec @NOAAFish_WCRO et d'autres partenaires pour surveiller la situation (angl seul). ow.ly/hKhn30lkqaE

Laura Anderson

A/Team-Lead, Digital Communications
Fisheries and Oceans Canada/Government of Canada
Laura.Anderson@dfo-mpo.gc.ca /Tel: 604-666-0392

Chef d'équipe intérimaire, Communications numériques
Pêches et Océans Canada/Gouvernement du Canada
Laura.Anderson@dfo-mpo.gc.ca / Tél. 604-666-0392

From: Anderson, Laura
Sent: Wednesday, August 8, 2018 3:41 PM
To: Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>; Chow, Vance <Vance.Chow@dfo-mpo.gc.ca>; Saindon, Carole <Carole.Saindon@dfo-mpo.gc.ca>; Morris, Christina <Christina.Morris@dfo-mpo.gc.ca>; Gareau, Laura <Laura.Gareau@dfo-mpo.gc.ca>
Cc: Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; NCR Media RCN (DFO/MPO) <Media.XNCR@dfo-mpo.gc.ca>; Jackson, Ashley <Ashley.Jackson@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.McElhone@dfo-mpo.gc.ca>; Wiebe, Robert <Robert.Wiebe@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>
Subject: RE: J50 - Media lines and Collaboration on communications activities with NOAA

Hi everyone,

Good news, this whale and her mother have been spotted by our crews in US waters. Of note, J35 is with the pod and still carrying her calf. We've spoken with NOAA and they're happy to have us tweet out this news and they'll retweet.

FYI: We'll be sending out the following tweet at ~ 4:00 pm PST on our regional twitter account – in translations now. Please let me know if there are any concerns.

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"Our marine mammal experts have sighted #KillerWhale J50 and her mother J16 in US waters. J35 is with this pod and is still carrying her calf. We are continuing to work with @NOAAFish_WCRO and other partners to monitor the situation. http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/updates-j50-j35.html"

Best,

Laura Anderson

A/Team-Lead, Digital Communications
Fisheries and Oceans Canada/Government of Canada
Laura.Anderson@dfo-mpo.gc.ca /Tel: 604-666-0392

Chef d'équipe intérimaire, Communications numériques
Pêches et Océans Canada/Gouvernement du Canada
Laura.Anderson@dfo-mpo.gc.ca / Tél. 604-666-0392

From: Geraldes, Betty
Sent: Wednesday, August 8, 2018 6:36 AM
To: Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>; Chow, Vance <Vance.Chow@dfo-mpo.gc.ca>; Saindon, Carole <Carole.Saindon@dfo-mpo.gc.ca>; Morris, Christina <Christina.Morris@dfo-mpo.gc.ca>
Cc: Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; NCR Media RCN (DFO/MPO) <Media.XNCR@dfo-mpo.gc.ca>; Jackson, Ashley <Ashley.Jackson@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.Mcelhone@dfo-mpo.gc.ca>; Anderson, Laura <Laura.Anderson@dfo-mpo.gc.ca>; Wiebe, Robert <Robert.Wiebe@dfo-mpo.gc.ca>
Subject: RE: J50 - Media lines and Collaboration on communications activities with NOAA

Hi everyone,

In case you haven't see it, here is NOAA's post tagging us, which is getting some pick-up.

Take care,

Betty

From: Girouard, Louise
Sent: Tuesday, August 7, 2018 9:19 PM
To: Chow, Vance <Vance.Chow@dfo-mpo.gc.ca>; Saindon, Carole <Carole.Saindon@dfo-mpo.gc.ca>; Morris, Christina <Christina.Morris@dfo-mpo.gc.ca>
Cc: Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; NCR Media RCN (DFO/MPO) <Media.XNCR@dfo-mpo.gc.ca>; Jackson, Ashley <Ashley.Jackson@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.Mcelhone@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Anderson, Laura <Laura.Anderson@dfo-mpo.gc.ca>
Subject: RE: J50 - Media lines and Collaboration on communications activities with NOAA

Carole,

Please see attached media lines which are in approvals here in the region.

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Of note, we have received confirmation from our officials that J50 and her mother J16 were sighted today and would like to issue the following tweet asap which would be retweeted by NOAA:

- We are happy to confirm that Southern Resident Killer Whale J50 and her mother J16 were located today in Juan de Fuca Strait.
- Nous sommes heureux de confirmer que l'épaulard résident du sud J50 et sa mère J16 ont été repérés aujourd'hui dans le détroit de Juan de Fuca.

For your information, below is the list of activities we're collaborating with NOAA on:

- For the time being, NOAA will be holding daily media briefings at 10:00 am PST to give updates on the situation. Paul Cottrell is participating on DFOs/Canada's behalf
- PAC comms will invite Canadian media to also join the daily briefings.
- NOAA is sharing audio clips of daily briefings with DFO which can be used for context and background for media inquiries.
- NOAA has created a web hub for the issue on page http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/updates-j50-j35.html and is posting daily updates there. DFO can direct enquiries to this page.
- NOAA is issuing daily update tweets, and DFO will issue similar tweets as needed.
- NOAA is considering options for a media ride along (which could include Canadian media who are interested)
- NOAA and DFO will share photos and videos of J50 for use by media, on websites and on social media.
- NOAA has invited PAC Communications to participate in daily debriefings at 5:00 pm PST to ensure coordinated communications efforts

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Khanna, Sukriti

From: Davies, Leri
Sent: August-08-18 2:58 PM
To: [redacted]
Cc: Malikian, Janine; Cottrell, Paul
Subject: RE: I'm putting together a whale special for CBC victoria

Hi [redacted]

As you can imagine Paul is up to his neck in J50 - what exactly do you want him to cover - maybe we can come up with an alternate that would fit your needs? Best, Leri

-----Original Message-----
From: [redacted]
Sent: 2018–August-08 9:43 AM
To: Davies, Leri
Subject: Re: I'm putting together a whale special for CBC victoria

Hi Leri,

Just checking in. Do you think Paul might be available for an interview Friday afternoon? Broadly whale, but we will probably focus on Southern Residents, and check in on hw the new regulations are working.

Possible? I'm hoping for a time around 5:05 pm on Friday.

[redacted]

On Tue, Jul 31, 2018 at 4:55 PM, [redacted] wrote:
> That would be awesome.
>
> On Tue, Jul 31, 2018 at 4:50 PM, Davies, Leri <Leri.Davies@dfo-mpo.gc.ca> wrote:
>> Yup - fishery officers patrolling on the water coordinate with our aerial surveillance plane which can cover longer distances and then call in any violations they see and the small vessels or the fisheries patrol vessel the M.Charles can steam in.
>>
>> Best, Leri
>>
>> -----Original Message-----
>> From: [redacted]
>> Sent: 2018–July-31 4:47 PM
>> To: Davies, Leri
>> Subject: Re: I'm putting together a whale special for CBC victoria
>>
>> Yes, that would be great. And by enforcement, do you mean whale
>> watching distances?
>>
>> On Tue, Jul 31, 2018 at 4:42 PM, Davies, Leri <Leri.Davies@dfo-mpo.gc.ca> wrote:
>>> [redacted]
>>>

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>>> Will look into this for you. Are you still interested in a
>>> ride-along on an enforcement overflight? [redacted]
>>> [redacted] Best, Leri
>>>
>>> -----Original Message-----
>>> From: [redacted]
>>> Sent: 2018–July-31 1:38 PM
>>> To: Davies, Leri
>>> Subject: I'm putting together a whale special for CBC victoria
>>>
>>> Hi Leri,
>>>
>>> I am putting together a whale special for CBC Victoria on August
>>> 10th, and I wasnted to invite someone from DFO to come on and talk
>>> about whales.
>>>
>>> Ideally, I'd love for someone to come to our live broadcast from the
>>> Bateman Centre.
>>>
>>> Is Paul around in the vicinity, that day? Long shot ask, I know.
>>>
>>> Also, do you have any staffers at the IOS who study whales, or is
>>> that completely out of Nanaimo?
>>>
>>> [redacted]
>>> CBC RADIO VICTORIA
>>> [redacted]
>> [redacted]
>>
>>
>> --
>> [redacted]
>> CBC RADIO VICTORIA
>> [redacted]
>
>
>
> --
> [redacted]
> CBC RADIO VICTORIA
[redacted]

--
[redacted]

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CBC RADIO VICTORIA

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Khanna, Sukriti

From: Malikian, Janine
Sent: August-08-18 9:31 AM
To: Cottrell, Paul
Subject: RE: CFAX 1070 Interview Request - Aug 8

Hi Paul,

CFAX radio now requesting the live interview at 11:30 am.

I'm guessing you're too busy, but let me know otherwise.

Thanks,

Janine

From: Malikian, Janine
Sent: August-08-18 8:55 AM
To: Cottrell, Paul
Subject: FW: CFAX 1070 Interview Request - Aug 8

Hi Paul,

Do you think you'd be available to do a live radio interview around 11 am today with CFAX 1070 Victoria?

If yes, I can give the reporter your cell #

Thanks,

Janine

From: [redacted]
Sent: August-08-18 8:07 AM
To: Malikian, Janine
Subject: RE: CFAX 1070 Interview Request - Aug 8

Hi Janine,

Thanks for getting back to me.

I was hoping to arrange an live radio interview about an hour after the briefing (**11am PT**).

Can you facilitate this request?

Cheers,

[redacted]

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From: Malikian, Janine [mailto:Janine.Malikian@dfo-mpo.gc.ca]
Sent: Wednesday, August 08, 2018 8:02 AM
To: [redacted] RHQ - Media.PAC
Subject: RE: CFAX 1070 Interview Request - Aug 8

Hi [redacted]

Paul will be taking part in a media briefing about J50 with NOAA this morning at 10am, and you're welcome to call in.

Call - in 888-566-6311 Participant Code: [redacted]

Cheers,
Janine

Janine Malikian
Communications Advisor | Conseillère en Communications
Fisheries and Oceans Canada | Government of Canada
Pêches et Océans Canada | Gouvernement du Canada
200-401 Burrard Street | Pièce 200 401, rue Burrard
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4
Janine.Malikian@dfo-mpo.gc.ca
Tel/Tél: 604-666-6766 | Fax/Télécopieur: 604-666-1847
Follow us on Twitter! @DFO_Pacific / Suivez-nous sur Twitter! @MPO_Pacifique

Fisheries and Oceans Canada | Pêches et Océans Canada

From: [redacted]
Sent: August-08-18 7:57 AM
To: RHQ - Media.PAC
Subject: FW: CFAX 1070 Interview Request - Aug 8

Good morning,

I am forwarding this interview request to the primary media email, as Lara Sloan seems to be away today.

Thanks,
[redacted]

[redacted]
CFAX 1070 AM | desk [redacted]
1420 Broad Street
Victoria, BC V8W 2B1
Canada

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From: [redacted]
Sent: Wednesday, August 08, 2018 7:44 AM
To: 'Lara.Sloan@dfo-mpo.gc.ca'
Subject: CFAX 1070 Interview Request - Aug 8

Hi Lara,

I am following up on a request for an interview with Paul Cottrell made yesterday by my colleague [redacted] for 11am today to discuss J-50.

Thanks a lot for the help.

[redacted]

[redacted]

CFAX 1070 AM | [redacted]
1420 Broad Street
Victoria, BC V8W 2B1
Canada

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Khanna, Sukriti

From: Malikian, Janine
Sent: August-08-18 2:51 PM
To: Thornton, Sheila
Cc: MacConnachie, Sean; Kennedy, Eddy; Lowe, Carmel; Cottrell, Paul; Girouard, Louise; Bate, Dan
Subject: RE: CTV media call -- Media line for approval

Thanks for the update, Sheila.

I will send you the correct # to speak on the call tomorrow.

Janine

From: Thornton, Sheila
Sent: August-08-18 2:32 PM
To: Malikian, Janine
Cc: MacConnachie, Sean; Kennedy, Eddy; Lowe, Carmel; Cottrell, Paul
Subject: RE: CTV media call -- Media line for approval

Hi Janine – no concerns.

FYI all – J50 and J16 have been sighted by our crew in US waters just north of Douglas Rock/West of Neah Bay. J35 has also just been sighted and is still carrying the carcass. Photos will be released late tonight or tomorrow.

I am heading out on the water in TCove – I will attempt to be on the media call for tomorrow. Janine – could you please ensure that I have the #?

Regards,

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Malikian, Janine
Sent: August-08-18 1:39 PM
To: Thornton, Sheila
Subject: FW: CTV media call -- Media line for approval
Importance: High

Oops, please use this version.

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Any major concerns?

Thanks,

Janine

From: Jackson, Ashley
Sent: August-08-18 1:37 PM
To: Smith, Kathleen; Girouard, Louise; Malikian, Janine; Northcott, Jennifer
Cc: Saindon, Carole; McElhone, Kathryn; Morris, Christina
Subject: RE: CTV media call -- Media line for approval

Sorry all. Revised slightly.

ISSUE: [redacted] CTV News is asking for a statement or comment from the Fisheries Minister regarding J50. Paul Cottrell has repeated said that permits are not currently in place to give J50 antibiotics via syringe or to feed her live chinook. He said no application has been made yet for such steps, and an application is needed before those steps could be affected. On the other hand, permits to do those things are in place in the States.

My question is: why has the Canadian government not approved those steps, or provided permits or encouraged application for a permit (when the NOAA in the States has)?

DEADLINE: 3-3:30 pm PST.

APPROVED BY:

PROPOSED RESPONSE:

- [redacted]
-
-
-

From: Jackson, Ashley
Sent: August-08-18 4:31 PM
To: Smith, Kathleen; Girouard, Louise; Malikian, Janine; Northcott, Jennifer
Cc: Saindon, Carole; McElhone, Kathryn; Morris, Christina
Subject: CTV media call -- Media line for approval

Hi there,
I just got a call from Vance -- they have a call in MINO about clarifying our position on permits. I would recommend the following line. Can all of you circulate for concurrent approvals ASAP so that Vance can get back to the reporter by their 5:30 deadline. Carole can you follow up with Vance with more details while we run approvals?

Proposed response:

- [redacted]

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- [redacted]
- [redacted]

Ashley Jackson

Communications Manager, Fisheries and Harbour Management
Fisheries and Oceans Canada / Government of Canada
ashley.jackson@dfo-mpo.gc.ca / Cel: [redacted]

Gestionnaire des communications, Gestion des pêches et des ports
Pêches et Océans Canada / Gouvernement du Canada
ashley.jackson@dfp-mpo.gc.ca / Tél. Cell. : [redacted]

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Khanna, Sukriti

From: [redacted]
Sent: August-08-18 6:40 PM
To: Cottrell, Paul; Greene, Annely
Subject: Permit Needed to Rescue Orca???

Mr. Cottrell,

Is it true that your department needs to issue a permit to issue life-saving treatment to the ailing orca J50—and that the permit hasn't been applied for???? I couldn't believe my ears when I just heard that on CBC Victoria. If that whale dies on your department's watch, it will be a travesty and an international embarrassment—Canada will appear to be a bunch of bumbling bureaucrats!

I was hopeful with your quote in the Vancouver Sun "We're going to make this happen," (referring to the orca's rescue) but I was alarmed by the words you followed with, "if it's deemed appropriate to do this." Are you not able to issue the permit, and if not, who is??? Who can I contact in your department to bring pressure on someone to make the right decision right now??

[redacted]
Victoria, BC

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Khanna, Sukriti

From: Harber, Lee
Sent: August-08-18 10:07 AM
To: Cottrell, Paul
Subject: quick question J50 treatment

Hey Paul, NHQ is asking how treatment options are being evaluated. Are you the one doing this?

Thanks

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

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Khanna, Sukriti

From: [redacted]
Sent: August-08-18 6:42 AM
To: Cottrell, Paul
Subject: J50

Morning Paul,
Wondering if there is an update on J50 this morning and any plans to try and help her?

[redacted]
CBC Radio One
Victoria
[redacted]

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s.16(2) s.21(1)(a) s.21(1)(b)

Khanna, Sukriti

From: Girouard, Louise
Sent: August-08-18 10:39 AM
To: Cottrell, Paul
Subject: lines

[redacted]

L

Louise Girouard
Regional Director Communications | *Directrice régionale des communications*
Pacific Region | Région du Pacifique
Fisheries, Oceans and Canadian Coast Guard | Pêches, Océans et Garde côtière canadienne
Louise.Girouard@dfo-mpo.gc.ca Tel: 604.666.3855 | Cell: [redacted]

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-08-18 8:16 AM
To: Davis, Neil; Thomson, Andrew
Subject: FW: Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50

The updated proposal for chinook feeding was sent this morning to us by NOAA. Below is my response to NOAA.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Cottrell, Paul
Sent: Wednesday, August 08, 2018 8:13 AM
To: Kristin Wilkinson - NOAA Federal; Thornton, Sheila
Cc: Lynne Barre; Teri Rowles; Sarah Wilkin - NOAA Federal
Subject: RE: Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50

Hi Kristin,
I don't see the pole and darting antibiotic methodology, antibiotic type and dosage described, is there a separate document/proposal outlining this activity. If so, please send so we can do up a licence. It would be great if you had a copy of your NOAA licence for this activity for reference, thanks so much!
The activities to collect health assessment information (eg fecal and breath samples) are licenced in Canada. The supplemental chinook feeding and use as a mechanism for medication treatment has not been licenced in Canada. There has not been a request to do this in Canadian waters. Is the whale sanctuary applying to do this in Canadian waters? We have not received a request. We will be reviewing this recent updated proposal/document on chinook feeding in anticipation of a request.
Thanks so much,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

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Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Kristin Wilkinson - NOAA Federal
Sent: Wednesday, August 08, 2018 6:51 AM
To: Thornton, Sheila; Cottrell, Paul
Cc: Lynne Barre; Teri Rowles; Sarah Wilkin - NOAA Federal
Subject: Fwd: Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50

Sheila and Paul,

We have received a revised proposal from The Whale Sanctuary Project. The updated version is attached here.

In summary, providing temporary nutritional support of J50 would be done first through a live fish release trial by one vessel and through a chute in the vicinity of J50, likely 50-100 yards in the front of her path. If she does take live fish then the next step will be taken to provide oral medications in the fish such as antibiotics and an anti fungal. This drug combination would address a range of bacterial infections J50 is susceptible to.

I apologize that I was not on the call yesterday. I am in the San Juans and spent the entire day with the core response team in discussions of this proposal and outlining future response goals.

Kristin
---------- Forwarded message ----------
From: **Katy Foster** <
Date: Tue, Aug 7, 2018 at 10:06 PM
Subject: Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50
To: Lynne Barre - NOAA Federal , Teri Rowles <>,
Kristin Wilkinson - NOAA Affiliate <
Cc: , Jeff Foster
Deborah Giles Joseph Karl Gaydos
< Martin Haulena <>, Brad Hanson
< andice Emmons - NOAA Federal <>, Sam Wasser
<>

Hi Everyone -

Attached is a finalised Proposal For Emergency Response To Provide Medication & Supplemental Nutrition To J50.

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All the best,
Jeff & Katy Foster

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

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Mbarushimana, Jenny

From: Girouard, Louise
Sent: August-08-18 8:48 AM
To: Davis, Neil
Cc: Thomson, Andrew; Lowe, Carmel; Malikian, Janine
Subject: FW: J50 Partners Comms Coordination Call @ 3:30pm
Attachments: Communications Plan for Emergency Response to J50 8_8_2018.docx

Good morning,

We know that the Vancouver Aquarium will be present on this call. Can you please advise if someone from program can also attend?

Thank you,

L

From: Forbes Darby - NOAA Federal <
Sent: Wednesday, August 8, 2018 8:41 AM
To:
Kurt Russo
Amilee Wilson - NOAA Federal
Ruth Howell - NOAA Federal
Michael Milstein - NOAA Federal
>; Jim Milbury - NOAA Federal <
RHQ - Media.PAC <Media.PAC@dfo-mpo.gc.ca>;
Sarah Mesnick - NOAA Federal
Subject: J50 Partners Comms Coordination Call @ 3:30pm

Good morning,
Just a reminder, we will have a call today at **3:30 pm PDT** to discuss coordinating communications on the J50 emergency response.

This call is for partners directly involved in the response effort to discuss our individual communication efforts, ways to help each other, and stay coordinated.

Here is dial-in information for the call.
503-326-7666 (no passcode)

Also, I want to share NOAA Fisheries' working communications plan. A working draft is also attached for those who are unable to access google docs. The plan outlines the steps we're taking to provide regular public updates and stay in sync with the on-the-water response team.

Please let me know if I should be reaching out to others who should be included in this conversation. And let me know if I can answer any questions in the meantime.

Regards,
Forbes

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--

Forbes Darby
Communication Program Manager
NOAA Fisheries Northwest Fisheries Science Center
2725 Montlake Blvd E
Seattle, WA 98112
Office: 206-302-2474
Cell: [redacted]

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J50 Crisis Communications Plan
Date: August 5, 2018

Background & Purpose:
Biologists and whale stranding experts are mobilizing to respond to an emaciated and ailing young killer whale of the endangered Southern Resident population, J50 (also known as Scarlet). Response options under consideration range from no intervention to feeding her live chinook salmon and treating her with antibiotics delivered in the fish. This population has been in the public eye locally and internationally and any news generates a high level of interest and concern. This plan is designed to coordinate information flow and review internally, and external updates to interested parties while response activities are underway. Our goal is to provide consistent and timely updates and minimize demand on the response team.

Daily Information Flow
Note: These are the daily check in meetings and do not preclude rapid response to breaking issues. We intend to post/release an update at least once a day.

9PM PDT	Response Team Daily Debrief (written summary distributed by Wilkinson)
10PM PDT	If Breaking News: WCR Communications Team sends out cleared "holding statement" based on Wilkinson statement for the Hill, Tribes, Media (WCR Clearance, sent to Guidon, Htun, Wilson, Milstein). Broad distribution. Note: Any breaking news during the day WCR will give a 1 hour notice to HQ before distributing to regional media & other audiences.
(next day)	
AM EDT	(as needed) Notifications to NOAA Fisheries Leadership (Htun, Guidon)
AM EDT	(as needed) Congressional Notification as needed (Guidon, Lizama?)
AM PDT	(as needed) Tribal Notification (Wilson)
8:30AM PDT	NOAA Fisheries + Partners Communications Daily Tag Up (Howell)
10AM PDT	Daily Media Call (Hosted by NOAA/Milbury/Barre, other SMEs as needed)
5PM PDT	Day-End Communications Check-In (SHORT) (WCR Comms Team, HQ and partners optional but welcome with an invitation)

NOAA Communications Team Members - Participants in 8:30am daily call.
Note: as we reach out to response effort partners, we may add their names

Name	Title & Organization	Roles/Responsibility	Contact Info
Ruth Howell	WCR Branch Chief for Communications and External Affairs	Team Lead	Cell: [redacted] Work: TBD

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Forbes Darby	NWFSC Communications Program Manager	Team Co-Lead; Response Partners communication lead	Cell: [redacted] Work: 206-302-2474
Sarah Mesnick	SWFSC Science Liaison	SWFSC Liaison, Strategic advice, general support as needed	Work: 858-546-7148 Cell: [redacted]
Kate Naughten	NOAA Fisheries Communications Director	HQ Liaison, provide HQ support as needed	Cell: [redacted] Work: 301-427-8057
Michael Milstein	WCR Public Affairs	Media Lead	Cell: [redacted] Work: 503-231-6268
Jim Milbury	WCR Public Affairs	Constituent affairs, video and graphics, clips monitoring, media backup	Work: 562-980-4006 Cell: [redacted]
Amilee Wilson	WCR Tribal Liaison	Tribal Lead	Work: 360-753-5820 Cell: [redacted]
Jennifer Ise	WCR Clearance	Clearance, Website updates	Work: 562-980-4046
John Ewald	NOAA Fisheries Public Affairs, Director	Support media efforts, Monitor social media, rumor and sentiment monitoring	301-427-8029; cell [redacted]
Jennie Lyons	NOAA Fisheries Public Affairs	Support media efforts, Monitor social media, rumor and sentiment monitoring	301-427-8013; cell [redacted]
Kate Brogan	NOAA Fisheries Public Affairs	Support media efforts, Monitor social media, rumor and sentiment monitoring	301-427-8030; cell [redacted]
Teri Rowles	NOAA Fisheries Office of Protected Resources	Response Team Liaison	Work: 301-427-8448
Samantha Guidon	NOAA Fisheries Congressional Affairs	Congressional and HQ notification	Work: 301-427-8022 Cell: [redacted]
Emma Htun	NOAA Fisheries Advisor for Regulatory Programs	HQ notification	Work: 301-427-8070
Lynne Barre	WCR Protected Species Seattle Branch Chief	Subject Matter Expert	Work: 206-526-4745 Cell [redacted]
Jenna Swartz	NOAA Fisheries Social Media	National Social media as needed	Cell: [redacted]
Matt Ellis	NOAA Fisheries Website	National website and social media support as needed	Work: 301-427-8044
Heather Wright,	NOAA Fisheries Video team	Video Support	Wright: 703-867-5569

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Paul Hillman, Deanna Morris			

Invited but optional: Scott Rumsey, Nicolle Hill

Communications Daily Tag Up Purpose & Agenda

- Debrief from response team re: accomplishments
- Hone daily messages
- Determine day's communications strategies
- Review previous day's effort
- Share inquiries and reactions from public and partners

Response Partners Communications Contacts

Organization	Name	Title & Role	Contact Info
University of Washington	Deborah Giles	Researcher, fecal sample collection	[redacted] 916-531-1516
	Sam Wasser	PI, researcher, fecal	[redacted]
	Michelle Ma (James Urton)	Assistant News Director	206-543-2580 [redacted]
Vancouver Aquarium	Martin Haulena Jim McBain	Veterinary Medical Assessment	[redacted]
	Deana Lancaster	Communications Manager	office: 604 659 3752 cell: [redacted]
SR3	Holly Fearnbach	Photogrammetry	[redacted]
Department of Fisheries and Oceans	Lara Sloan	DFO Communications Advisor	Office: 250.363.3749 Mobile: [redacted] Lara.Sloan@dfo-mpo.gc.ca media.pac@dfo-

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	Paul Cottrell John Ford Stephen Raverty	DFO Marine Mammal Coordinator Killer whale biologist Pathologist and expert on diseases in killer whales	mpo.gc.ca 604-240-3841 250-667-4698 778-839-6916
Lummi Nation	Kurt Russo Back up POC: Tony Hillaire	Lummi Treaty Protection Task Force Lummi Indian Business Counsel, Chief of Staff	
Governor Inslee office/WDFW	WDFW Enforcement	JT Austin Tara Lee	
King County Department of Natural Resources and Parks	Doug Williams	PIO	office: 206-477-4543 cell:
Sea World	Taylor Claytor		
The Whale Sanctuary Project	Charles Vinick Jeff Foster Katy Foster	Executive Director	vwhalesanctuaryproje ct.org
Whale Museum's Soundwatch Program	Taylor Shedd		

Media POCs:

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See media plan here
Jim Milbury (Primary)
Michael Milstein (Backup)
John Ewald/Jennie Lyons/Kate Brogan (Backups; HQ/OPR liaisons if needed)
Maggie Mooney-Seus (Backup)

Subject Matter Experts
Lynne Barre, Primary Spokesperson, SRKW recovery plan and efforts. Management and conservation efforts, response activities: 206-526-4745;
Brad Hanson, SRKW research program, biology, life history, research on limiting factors: 206-860-3220;
John Durban, Photogrammetry, Life history and population dynamics of killer whales: 858-334-2866;
Mike Ford, General SRKW research program, genetics: 206-860-5612;
Teri Rowles, Veterinary consultations/coordination, Health and Stranding program, permit requirements: 301-427-8448;
Sarah Wilkin, stranding program, permit requirements, response activities: 301-427-8470;
Linda Rhodes, microbiology and detecting microbes in biological samples (breath, biopsy, etc): 206-860-3279;

Order of Notification
1. Regional and National Fisheries and NOAA Leadership
2. Congressional/Tribal
3. Stakeholders/Partners
4. Public/Media

NOAA Clearance and Notification Process (Social Media posts, talking points, webstories, etc)
Note: WCR has been designated the lead entity. All communications are to be treated like a mini-rollout with WCR Clearance and short suspense HQ, Congressional, & tribal notification.

- Controversial/Breaking News
    - WCR Clearance (SME (Wilkinson), Branch Chief (Barre), ARA (Yates), Ise, Hill/Rumsey)
    - In rapid succession:
        - HQ/Hill notification: Ise sends to Sam G (cc: Emma and Kate)
        - Tribal notification: Wilson sends to tribes (cc: Heather Sagar and Linda Belton?)
- Non-controversial/Previously Cleared information
    - WCR Clearance
- Note: all finalized and approved communications will be stored in the J50 Google Drive (i.e. talking points, daily updates, press releases, etc)

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Planned Products Under Development

- Dedicated WCR website for updates & documents (Ise, Peters --complete)
- Email for ideas and suggestions from the public (Killerwhale.help@noaa.gov)
- Photo and Video Footage (Freelancer John Gussman) (Milstein)
- Regular social media posts (Milstein/Milbury, Swartz, Ellis)
- Flickr and Broll for still and video footage (Milbury, Wright)
- Holding statement for J50 disappearance (Milstein, Milbury)
- Media Clips (Milbury)
- FAQs on Feeding and Treatment

Products and Tactics for Future Consideration

- Interactive Forum on San Juan Islands (TBD; possibly partners)
- Op-Eds or Leadership Statements (As Needed)

Key Messages and Talking Points (As of 8/4/18)

1. **Our scientists, with other experts, are on the water right now assessing the health of J50, the juvenile female Southern Resident killer whale known as Scarlet that has been seen in poor condition.**
    a. Sightings indicate that J50 is emaciated and is sometimes lethargic in the water, but still has periods of activity, including feeding. Analysis of a small sample of her breath did not definitively indicate an infection or illness, although it does not rule one out either.
    b. The steps we are taking to understand and treat J50 require a scientifically sound approach. We must approach this carefully and deliberately so that if we decide to feed her, we avoid creating a dependence on supplied food.
    c. To inform development of additional emergency response and medical treatment plans, scientists will;
        i. Continue with coordinated observations and documentation of behavior and condition (using vessel and Unmanned Aerial Systems, or UAS).
        ii. Conduct a veterinary health assessment.
        iii. Collect additional diagnostic samples (e.g., fecal, breath, exudate or skin patch) if possible over the next several days.
    d. These efforts are being conducted by experts authorized under NOAA Fisheries Marine Mammal Health and Stranding Response Program permit and coordinated between U.S. and Canada.

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2. **Over the weekend (Aug 4-5), these experts – including the top veterinarians and whale biologists from both the U.S. and Canada – will be evaluating short-term response options to help this whale that has grown weaker over time. These options range from doing nothing to getting food and medicine to the emaciated whale.**
    a. Operations to assist J50 could begin as soon as this Monday (Aug 6).
    b. We ask boaters and aircraft to avoid the area where researchers are operating and follow all regulations and air traffic restrictions.
    c. A plan to assess the possibility of emergency medical treatment is in development for evaluation by NOAA Fisheries under our Marine Mammal Health and Stranding Response Program permit.
    d. Details of the plan are pending and risks to J50 and other Southern Residents will be evaluated and minimized to the extent possible prior to authorization.

3. **We share the public's concern over the condition of the Southern Residents, and in particular, J50. While difficult, this is also opportunity for researchers to more closely study and understand the root cause of J50's condition in hope of preventing or treating other whales in the future.**
    a. NOAA Fisheries and partners are also monitoring the situation with J35, also known as Tahlequah, who has been carrying her dead calf for over a week.
    b. We all feel the loss of another calf, and our scientists continue to monitor her and encourage efforts to reduce vessel disturbance around her.
    c. An emergency response for J35 has not yet been evaluated or initiated.

4. **We're also continuing our longer-term efforts to address the three main threats to these whales: having enough salmon to eat, vessel traffic and underwater noise, and marine pollution.**
    a. Refer to the Species in the Spotlight 5-year action plan.

5. **Working with partners in other federal agencies, academia, and the private sector, we've developed advanced unobtrusive scientific methods to learn about the lives of these killer whales, monitor their status, and understand threats to their population.**
    a. The techniques include: photogrammetry, tagging, genetic analysis of scat, and breath sampling for microbes.

6. **We have more information about efforts to recover the Southern Residents on our website. Also, we will provide progress updates on our Facebook**

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page. In the meantime, we ask for the public's cooperation in steering clear of the immediate area while research and emergency response activities are taking place.

Key High-level Messages:

- Southern Resident killer whales are a highly endangered, specialized population of killer whales that now number 75, the lowest in decades. Female whales are especially valuable to the population given their reproductive potential.
- Safety is paramount. The first priority of all operations remains the safety of responders and the whales.
- We are drawing on the knowledge and expertise of the world's top experts to develop and implement the response plan, and will consistently reevaluate the benefits of intervention against the risk of disturbance to the J-pod as a whole.
- Biologists recognize that most killer whales that have deteriorated to the extent of J50 do not recover. Attempting intervention has rarely if ever been attempted before. Doing so is an experimental approach, with uncertain chances of success.
- While we are now focused on short-term support for J50, we continue to work with partners across the region to advance plans for the long-term recovery of Southern Resident killer whales. Everyone on the West Coast has a role in protecting the whales.

Background:

- J-50 history: Born in late December 2014. Mother, J16. Drone photogrammetry studies by Durban (NOAA/SWFSC), Fearnbach (SR3) and Barrett-Lennard (Vancouver Aquarium) have documented J-50's small size for her age since her first year of life, and notably poorer body condition in 2017. More recently, Center for Whale Research observed further declining body condition from boat observations starting in January 2018 culminating in the current conspicuous depression behind the blowhole "peanut head". Activity level and association with mom and pod has varied.

- Consultation call 7/26: Gaydos/SeaDoc Society held a call of researchers and vets to discuss history and current condition of J50 based on field observations and sampling. Activity level and association with mom and pod has continued to vary in recent observations. No obvious skin condition. Recent odor from breath smelled by Giles/UW. Fecal samples collected by Hanson/NWFSC and Giles/UW from whale groups with J50 and frozen, but have not been analyzed or identified as J50 samples. Video and breath sample collected by Hanson/NWFSC 7/21, no breath odor detected, analysis pending. Vessel activity near J50 reduced by

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proactive efforts by Pacific Whale Watch Association, Soundwatch, Enforcement and coordinated in US and Canadian waters. Next steps- continued photo, video and behavior monitoring, UAS photogrammetry field visit planned starting 8/1. Vets will develop sampling protocol for cytology/culture samples from breath and feces.

- Consultation calls 8/2: NOAA hosted a call to review updates. Photos from UAS (Durban/SWFSC, Fearnbach/SR3) collected on 8/1 show J50 in very poor condition (similar to the measured condition of her cousin J52 before he disappeared in 2017) and show white patch behind the blowhole and it is unknown if on skin or exudate from blowhole. UAS observations of J50 close with J16, J50 near J26 chasing fish at surface, and J50 defecation. Lagging behavior may be increasing, and in general whale displays an unusual labored ("ploughing") action when surfacing, but periods of activity also observed by UAS and from boat observations (US and Canada). Additional information to be collected- UAS will continue including photogrammetry measurements of condition, photo documentation of skin condition and respiration rates. Breath sample and confirmed collection a fecal sample from J50 for PCR analysis if possible. A veterinary health assessment was identified as a priority and NOAA has provided authorization for several vets.

s.21(1)(a) s.21(1)(b) s.23

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Dozie, Juachi

From: Brekke, Heather
Sent: August-08-18 10:07 AM
To: Stewart, Julie; Busby, Corina
Cc: Davis, Neil; McMillan, Christie
Subject:
Attachments:

Follow Up Flag: Follow up
Flag Status: Completed

Hi Julie and Corina,

As per our phone call this morning, please see the revised text for your review/comment.

Please let me know if you have any questions or require further support on this from the Pacific region.

Best,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

Pages 1700 to / à 1794

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pages 1548 to / à 1642

Pages 1795 to / à 1796
are duplicates of
sont des duplicatas des
pages 249 to / à 250

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Khanna, Sukriti

From: Stewart, Julie
Sent: August-08-18 3:04 PM
To: Legault, Josee (DOJ)
Cc: Brekke, Heather; Davis, Neil; Busby, Corina; Makkay, Kristina
Subject:
Attachments:

Importance: High

Josee:

Julie Stewart
Director / Directrice
Species at Risk Program / Programme des Espèces en Péril
200 rue Kent St.
Station 10W061
Ottawa, ON
K1A 0E6

(613) 949-7524 (t)
(c)

Julie.stewart@dfo-mpo.gc.ca

From: Busby, Corina
Sent: Wednesday, August 8, 2018 4:47 PM
To: Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>
Subject:

Page 1798

is withheld pursuant to sections

est retenue en vertu des articles

21(1)(b), 23, 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

Pages 1799 to / à 1892

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pages 1549 to / à 1642

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Mbarushimana, Jenny

From: Malikian, Janine
Sent: August-08-18 4:16 PM
To: Davis, Neil
Cc: Girouard, Louise
Subject: FW: CTV News Skype request - Sheila Thornton

Neil,

Please see media request below re: permitting for the activities of the response plan in Canadian waters.

We heard from NOAA that they were going to submit their application this afternoon, and media are already asking about timeline.

Do you know what the status of the application is and when it would be expected to be approved, and do you have a response to the query?

Merci,

Janine

From: [redacted]
Sent: August-08-18 3:49 PM
To: Malikian, Janine
Cc: [redacted]
Subject: RE: CTV News Skype request - Sheila Thornton

Janine,

I understand form NOAA that they are involved in making an application to the DFO this afternoon for the permits for antibiotics and feeding chinook to J50. When is that application expected to be approved by the DFO?

Please advise as soon as possible this afternoon.

Thanks,

[redacted]

[redacted]
CTV News Vancouver Island | [redacted]
1420 Broad Street
Victoria, BC V8W 2B1
Canada

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From: Malikian, Janine [mailto:Janine.Malikian@dfo-mpo.gc.ca]
Sent: August-08-18 2:51 PM
To: [redacted]
Subject: RE: CTV News Skype request - Sheila Thornton

OK, noted [redacted]

Cheers,

Janine

From: [redacted]
Sent: August-08-18 2:48 PM
To: Malikian, Janine
Subject: RE: CTV News Skype request - Sheila Thornton

I too am interested in a statement regarding permitting if available.

Thanks,
[redacted]

[redacted]
CTV News Vancouver Island | [redacted]
1420 Broad Street
Victoria, BC V8W 2B1
Canada

From: [redacted]
Sent: August-08-18 2:47 PM
To: 'Malikian, Janine'; [redacted]
Subject: RE: CTV News Skype request - Sheila Thornton

Hi Janine,

Do you have a photo of Sheila Thornton you can please send me on the off chance she isn't available by deadline?

Thanks,
[redacted]

[redacted]
CTV News Vancouver Island | [redacted]
1420 Broad Street
Victoria, BC V8W 2B1
Canada

s.19(1)

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From: Malikian, Janine [mailto:Janine.Malikian@dfo-mpo.gc.ca]
Sent: August-08-18 2:29 PM
To: [redacted]
Cc: [redacted]
Subject: RE: CTV News Skype request - Sheila Thornton

OK, thanks for the deadline, Sheila.

Working on this for you.

Cheers,

Janine

From: [redacted]
Sent: August-08-18 2:26 PM
To: Malikian, Janine; RHQ - Media.PAC
Cc: [redacted]
Subject: RE: CTV News Skype request - Sheila Thornton

Hi Janine – My deadline is 4 pm PST today.

Do you have any kind of statement on what the current status of permitting is in Canadian waters for J50 – and why? It would be good to have something in writing given the interest in this case on both sides of the border if Sheila Thornton is unavailable.

Thanks –

[redacted]

From: Malikian, Janine [mailto:Janine.Malikian@dfo-mpo.gc.ca]
Sent: Wednesday, August 08, 2018 2:22 PM
To: [redacted] RHQ - Media.PAC
Cc: [redacted]
Subject: RE: CTV News Skype request - Sheila Thornton

Hi [redacted]

Apologies about the delay in getting back to you. Sheila Thornton is back in the field and hard to reach.

Not sure it will be possible to do an interview with her today. What's your deadline?

Thanks,
Janine

Janine Malikian
Communications Advisor | Conseillère en Communications
Fisheries and Oceans Canada | Government of Canada

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Pêches et Océans Canada | Gouvernement du Canada
200-401 Burrard Street | Pièce 200 401, rue Burrard
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4
Janine.Malikian@dfo-mpo.gc.ca
Tel/Tél: 604-666-6766 | Fax/Télécopieur: 604-666-1847
Follow us on Twitter! @DFO_Pacific / Suivez-nous sur Twitter! @MPO_Pacifique

Fisheries and Oceans Canada | Pêches et Océans Canada

From:
Sent: August-08-18 2:15 PM
To: RHQ - Media.PAC
Cc:
Subject: RE: CTV News Skype request - Sheila Thornton

Hello – It's been a few hours and I haven't heard back. Is anyone working on this request for me?
Thanks –

CTV Vancouver
Cell:

From:
Sent: Wednesday, August 08, 2018 11:56 AM
To: RHQ - Media.PAC (Media.PAC@dfo-mpo.gc.ca)
Subject: CTV News Skype request - Sheila Thornton

Hi there,
Thanks for having Paul and Sheila on the conference call this morning. That was very helpful.
I am wondering if Sheila Thornton might be available for a Skype call with me today. All other agencies are being very careful not wanting to weigh into the permitting issue. She had some very good information today and would be ideal to speak to where things are at on the Canadian side.
I would be sharing this material with my colleagues at CTV 2 in Victoria as well as King 5 and KOMO News in Seattle.
If Sheila is in Vancouver or Victoria we could also get her on-camera instead of Skype if that is easier.
Thanks so much –

CTV Vancouver
Cell:

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Mbarushimana, Jenny

From: Cottrell, Paul
Sent: August-08-18 6:15 PM
To: Thomson, Andrew; Davis, Neil
Cc: Harber, Lee; Girouard, Louise
Subject: Fw: Daily Debrief - Wednesday, August 8th - J50 Alive
Attachments: J50Location_8.7.18.jpeg

Fyi. Debrief cancelled tonight.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Kristin Wilkinson - NOAA Federal <[redacted]>
Sent: Wednesday, August 8, 2018 4:40 PM
To: Katy Foster; Brad Hanson (NOAA Federal); Holly Fearnbach; [redacted]ohn Durban - NOAA Federal; Teri Rowles; Lynne Barre - NOAA Federal; Marty Haulena; Deborah Giles; Michael Milstein - NOAA Federal; Scott Rumsey - NOAA Federal; Mark Strom - NOAA Federal; Ruth Howell; Mike Ford; Jim Milbury - NOAA Federal; Barry Thom - NOAA Federal; Thornton, Sheila; Chris Yates - NOAA Federal; Forbes Darby - NOAA Federal; Kate Naughten; John Ewald - NOAA Federal; Becker, Penny A (DFW); Cottrell, Paul; Teresa Mongillo; Amilee Wilson - NOAA Federal; Jennifer Ise - NOAA Federal; Emma Htun - NOAA Federal; Samantha Guidon - NOAA Federal; Katherine Brogan - NOAA Affiliate; Jennie Lyons; Deborah Fauquier; jeff foster; Sarah Mesnick; Director Marine Mammal; Kevin Werner - NOAA Federal; Joseph Karl Gaydos; [redacted]; Jim McBain; Kimball, Taylor P (DFW)
Subject: Daily Debrief - Wednesday, August 8th - J50 Alive

Hello All -

The evening call with the core team is cancelled for this evening. There were no actions taken by the response team today but J50 was sighted by DFO again. Unfortunately the location of J50 (see attachment for location) was out of range for the response team to launch due to distance and the timing of the sighting.

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

On Tue, Aug 7, 2018 at 5:47 PM, Kristin Wilkinson - NOAA Federal [redacted]> wrote:
Hello All -

J50 was sighted alive today by DFO off of Port Renfrew. Sheila Thornton will be providing images to the team later today. No on water actions were taken by the response team today.

Our evening call with the debrief team has been cancelled since Sarah Wilkin and I spent the day in Friday Harbor meeting with the core response team. We met for 4.5 hours at Friday Harbor Labs and discussed possible scenarios, near term objectives, and scheduling. The team also identified additional sample collection

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that would be ideal to have but they will remain secondary to breath, fecal, the veterinary health assessment and antibiotic administration goals.

Once those goals are accomplished we will be working on providing temporary nutritional support therapy to J50. This action is authorized and all of the needed resources are available and in place for deployment.

If we do deploy the response team and encounter J50 we will be working with WDFW Enforcement and Soundwatch to maintain a 500 yard perimeter.

That's all for now,

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted]Cell

On Mon, Aug 6, 2018 at 9:53 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Good Evening -

It was another day without whales in the inland waters so our response team did not do any photography, sample collection, or perform a health assessment. K and L pod were sighted at Swiftsure Bank by DFO, no sign of J pod.

We were successful at staging all of the needed veterinary supplies at Friday Harbor Labs so they are readily available for the future. Dr. Hendrik Nollens from Sea World flew from San Diego to Friday Harbor today and is poised to conduct a health assessment on J50 and provide an injection of antibiotics to her if given the opportunity tomorrow. Sarah Wilkin, our National Stranding Coordinator also flew to Seattle and Sarah and I will be traveling to the San Juans early tomorrow morning to meet with the core team to discuss logistics and operations for the coming week. We will be on the island coordinating with the team on Tuesday and Wednesday.

The Whale Sanctuary Project and the Lummi Tribe in coordination with NWFSC did a test run today to work through the logistics of the transport of fish. Two vessels were utilized, the King Co. DNR & Parks Sound Guardian and the Lummi Tribe Enforcement vessel. There was a blessing of the fleet and the test run went smoothly with no significant challenges noted. This project is still pending authorization but will be available on Tuesday if given the approval to proceed.

WDFW Enforcement will be doing dedicated Southern Resident Killer Whale patrols over the next 7 days. Our response team will be working in coordination with Enforcement if their assistance is needed for perimeter control or support.

The Communications Team shared the below resources with the team earlier today:
http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/updates-j50-j35.html

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Linked from the homepage under What's New: http://www.westcoast.fisheries.noaa.gov/index.html
Linked from J50 news story: http://www.westcoast.fisheries.noaa.gov/stories/2018/08032018_srkw_j50.html
Short url: http://bit.ly/NOAAJ50J35
There is also an email address that the public can use to email us their input and ideas, Killerwhale.help@noaa.gov

All for now, thanks everyone -

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

On Mon, Aug 6, 2018 at 1:57 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Hello All -

The evening debrief calls are going to focus on operations with the core field response team. After the nightly call, I will be providing email updates to all of you with what we accomplished that day and what our next day plans are. Thank you for being flexible and understanding as we get our operations and field teams staffed and organized.

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

On Sun, Aug 5, 2018 at 10:14 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Hi Everyone -

Thank you to those of you who were able to join us tonight for the Sunday debrief call. I apologize that I had to ask some of you to sign off since we were at capacity and some of the field response team was unable to sign in.

DFO reported seeing L's and K's west of Port Renfrew but J pod was not sighted today. Heavy fog has been present which has limited sightings of the whales.

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We do have some updates on prioritization of field response activities;
1. Sample Collection - breath and fecal
2. Health Assessment & Injection of a long lasting antibiotic via pole syringe if possible, if not, remote delivery via Dan Inject. Dr. Marty Haulena and Dr. Jim McBain are on standby for Monday and Dr. Hendrik Nollens on Tuesday. The antibiotic treatment would not be available until Tuesday.
3. Providing temporary nutritional support therapy to J50 in coordination with The Whale Sanctuary Project, the Lummi Tribe and NWFSC. The Lummi Tribe will be doing a dry run on Monday and will be ready to transport live fish on Tuesday. They would have ~ 12 fish per day. John Gussman will provide UAS services to document the process and whale behavior. Discussions will continue on oral medication treatment.

Communications provided an update from their team about the website, public input, social media (1 post per day), partner engagement, and the daily press call at 10am.

I'll be hosting our consultation team call tomorrow morning from 9:30-11 and will likely head up to the San Juans on Monday night or early Tuesday morning to meet with the team in person.

All for now,

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

On Sat, Aug 4, 2018 at 10:13 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Good Evening Everyone -

Thank you to those of you who were able to join us tonight for the Saturday debrief call.

While J50 was not sighted today we can confirm that J pod is headed inland and was last sighted eastbound near Jordan River and Sooke around 7pm. They will likely come into the San Juan area tonight so we are very hopeful we will accomplish on Sunday the below goals;

1. Fecal sample collection from J50 - Deborah Giles, University of Washington
2. Breath sample collection from J50 - Hanson, NWFSC
3. Sample collection of skin if needed, areas of discoloration have been noted - Giles or Hanson
4. Veterinary medical assessment on J50 - Haulena, Vancouver Aquarium (Dr. Haulena will be on Brad Hanson's vessel)
5. Additional imagery and video of J50 by UAS - Durban and Fernbach, SWFSC and SR3 Images of the flukes and overall skin appearance is of interest to the veterinarians as well as respiration rate.
6. After the veterinary health assessment is complete a veterinarian call will be hosted by NOAA Fisheries - timing to be determined. This will be a small group of veterinarians to discuss the best treatment for J50's condition.

The NOAA Communications and External Affairs team provided a very valuable overview of their plans to communicate with the public and with the media. I'll let Ruth and Forbes outline their plan in a separate email. Any media inquires can be directed to the Communications Team, Michael.Milstein@noaa.gov or via cell at 971-313-1466. Michael did reach out to the news directors in the Seattle area requesting they be mindful of the on-water activities so we can make the most of our time with J50 and the other SRKW's.

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Many of you have asked for permission to view the Google Drive, here is a direct link and I will also follow up with an invite. We have all agreed that images will not be shared outside of the group. https://drive.google.com/drive/folders/1Gg5Whty6QvPFPYJEUps2PtvTXgRDT5eq?usp=sharing

We will plan to talk again tomorrow night, Sunday, August 5th at 9pm. Please call into 503-326-7672.

A huge thank you to everyone involved!

--

Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted]Cell

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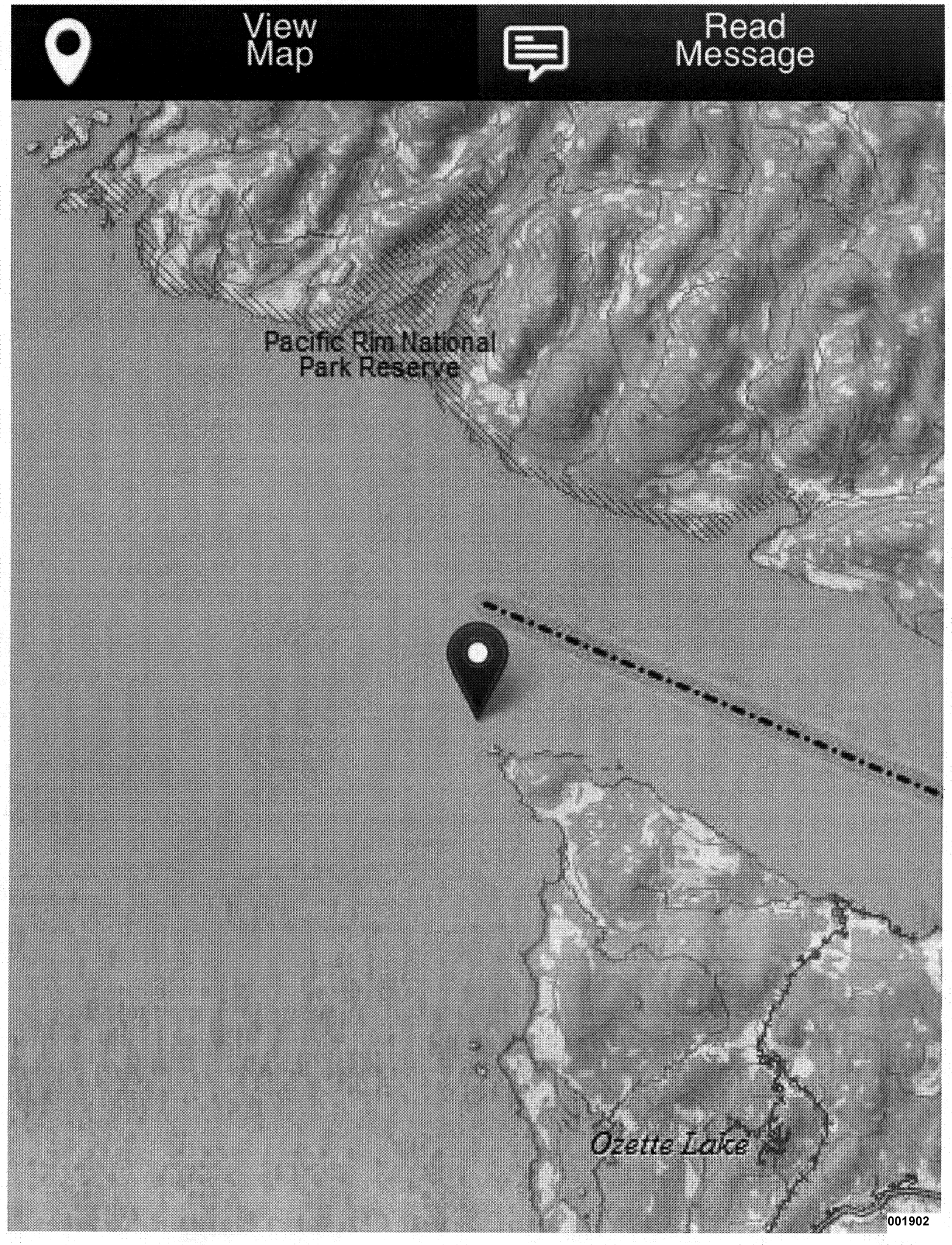

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Mbarushimana, Jenny

From: Girouard, Louise
Sent: August-08-18 8:43 PM
To: Thomson, Andrew; Davis, Neil
Subject: Fw: Emailing: 080818doc2 CTV Vancouver-CTV News at Six-Will Canadian red tape hinder orca rescue_18h06 (PT)_1min55.doc
Attachments: 080818doc2 CTV Vancouver-CTV News at Six-Will Canadian red tape hinder orca rescue_18h06 (PT)_1min55.doc

Sending for background as this will be the main point we will want to address on the call tomorrow morning.

Happy to discuss.

L

From: HKCommunications [redacted]
Sent: Wednesday, August 8, 2018 8:37 PM
To: NCR Media RCN (DFO/MPO); Gareau, Laura; Trudeau, Miriam; Saindon, Carole; Girouard, Louise; Smith, Kathleen; Gillis, Sheldon; Chow, Vance; O'Halloran, Mark; Sankey, Lauren; Burelle, Marie-Pier; Quinn, Caroline; Strickland, Alexandra; Lamar, Anne; Hubley, Marian; Butcher, Ashley; Malko, Carol; Jarjour, Jasmine; McElhone, Kathryn; Wiebe, Robert; Morris, Christina; Knudsen, Mark; Stanek, Frank; Belle-Isle, Alain; MacDonald, Heidi; Quirion, Stephanie; Mullan-Boudreau, Caitlin; Kahn, Zoe; McNab, Alexandra; Bell, Karin; Jackson, Ashley; Fagan, Ashley; Patzer, Adria; Northcott, Jennifer; Plamondon, Michel; Bate, Dan; Dunderdale, Sara; Pittman, Erika; Petersen, Krista; Renauld, Claudine; LeBreton, Ginette; Foerter, Holly; Deger, Linda; Mayrand, Benoit; Young, George
Subject: Emailing: 080818doc2 CTV Vancouver-CTV News at Six-Will Canadian red tape hinder orca rescue_18h06 (PT)_1min55.doc

H & K Communications

[redacted]

[redacted]

SOURCE: CTV-VANCOUVER

PROGRAM: CTV NEWS AT SIX

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

DATE: AUGUST 8, 2018

TIME: 18:06 (PT)

LENGTH: 1:55 MINS

REFERENCE: 080818DOC2

WILL CANADIAN RED TAPE HINDER ORCA RESCUE?

MI-JUNG LEE (CTV News Anchor): Researchers are getting closer to tracking a dying orca named "J50," but the effort to save her life keeps hitting a bureaucratic roadblock. CTV's Sheila Scott reports of efforts to cut through government red tape.

SHEILA SCOTT (CTV Reporter): For many, this photo of four-year-old J50 swimming with her mother in the foggy waters near Port Renfrew Tuesday is a major relief.

MARTIN HAULENA (Head Veterinarian, Vancouver Aquarium): And having that particular individual visualized, that means a big deal.

SCOTT: Not only does it show the ailing whale is still alive, it's also helped pinpoint location. Crews in the U.S. and Canada have been looking for J-pod for days as they were going to plan to save her life.

MICHAEL MILSTEIN (NOAA Fisheries): We've got people in position to take steps as soon as they have access.

SCOTT: Permits to test and possibly medicate the dying orca have been approved in the U.S., but in Canada...

SHEILA THORNTON (DFO Research Scientist): Our Species at Risk Act does require us to take a more fulsome review of the potential risks.

SCOTT: Paperwork is still being worked on. That means if researchers can even get close to J50 in Canadian waters, they can only assess her and can't give medication.

MILSTEIN: We are ready to take that first step of the assessment and learn what we can from that.

SCOTT: But in the U.S., scientists are already approved to give the orca antibiotics and to feed her medicated salmon. Members of the Lummi Nation have been practising on the water.

UNIDENTIFIED (Lummi Nation): To make sure that we can drop them when the orcas come back.

SCOTT: Even with the time running out, it's not clear how long it might take for a permit to be approved in Canada, if at all.

THORNTON: We do need to be very cognizant of what the effects of the treatment on J50 would be or what the potential adverse effects on her family members.

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SCOTT: Despite the red tape, assessment crews are ready.

HAULENA: Make sure everyone's on the same page using the same drugs and wanting to do the same sort of thing.

SCOTT: Perhaps lucky for J50, her pod was seen in U.S. waters late Wednesday afternoon.

Sheila Scott, CTV News, Vancouver.

***

(Words: 413)

Your message is ready to be sent with the following file or link attachments:
080818doc2 CTV Vancouver-CTV News at Six-Will Canadian red tape hinder orca rescue_18h06 (PT)_1min55.doc

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

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H&K Communications

hkcomm2@rogers.com

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s.21(1)(a)

s.21(1)(b)

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Mbarushimana, Jenny

From: Burns, Adam
Sent: August-08-18 5:45 AM
To: Davis, Neil; Thomson, Andrew; Harber, Lee
Cc: Jenkins, Randy
Subject: FW: Supplementary Media Coverage and Transcript / Couverture médiatique supplémentaire et transcription

Hey folks,

Would have been good to include reference to this in yesterday's update. Randy will be in touch to prepare a further update for MINO.

https://vancouverisland.ctvnews.ca/ailing-killer-whale-j50-spotted-off-coast-of-port-renfrew-1.4043351

Thx

AB

From: NCR Media RCN (DFO/MPO)
Sent: August 8, 2018 7:29 AM
To: NCR Media RCN (DFO/MPO) <Media.XNCR@dfo-mpo.gc.ca>
Subject: Supplementary Media Coverage and Transcript / Couverture médiatique supplémentaire et transcription

Please see below for twelve DFO/CCG-related articles and one transcript that were captured from online sources not available through contracted news outlets that are part of the Electronic Media Monitoring feed.

Vous trouverez ci-dessous douze articles et une transcription en lien avec Pêches et Océans Canada et la Garde côtière canadienne qui ont été pris à partir de sources en ligne non disponible à travers la REM.

Total Number of Articles / Nombre total d'articles : 12

(1) **Fog suspends search for humpback whale dragging 45 metres of rope in Bay of Fundy**
Rescue crews on standby, analysis of gear removed from right whale near Grand Manan on Sunday continues
CBC News, August 7, 2018 7:33 PM AT

By Bobbi-Jean MacKinnon

Whale rescue crews remain on standby, waiting to search for another entangled whale in the Bay of Fundy after a female humpback with a calf was spotted dragging about 23 metres of rope from each side of her mouth near Digby Neck on Friday.

(2) **Ailing killer whale J50 spotted off coast of Port Renfrew**
CTV News – Vancouver Island, August 7, 2018 6:48PM PDT

An emaciated endangered orca that is believed to be close to death has been spotted alive off the coast of Vancouver Island.

(3) **'We needed to intervene': Cross-border efforts mounted to help starving orca**
Officials preparing to give young whale J-50 medication by dart or possibly live fish

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CBC News, August 7, 201812:35 PM PT

By Lisa Johnson

Unprecedented efforts are in the works to help a malnourished and possibly sick young killer whale last spotted off the B.C. coast — if officials can reach her in time.

(4) **The clock is ticking for a young, southern resident orca, J-50**
The clock is ticking for a young, southern resident orca. As of this morning, there was still no sign of the ailing J-50. Scientists and veterinarians on both sides of the border are preparing for an emergency health assessment and medical intervention when J-pod returns to inland waters. Mary Griffin reports.
CHEK News, August 7, 2018

By Mary Griffinon

The fog is thick on Vancouver Island's west coast, making it tough for scientists searching for an orca offshore.

(5) **Official says paperwork poses an issue to treat killer whale in Canadian waters**
CHEK News, August 7, 2018

Delivering potentially life-saving treatment for an emaciated killer whale could depend on whether it is found in Canadian or American waters.

(6) **Du saumon d'élevage de Cooke Aquaculture s'échappe à Terre-Neuve**
Plusieurs milliers de saumons d'élevage se sont échappés le long de la côte sud de Terre-Neuve, a confirmé l'entreprise néo-brunswickoise Cooke Aquaculture, mardi.
Radio-Canada, 7 août 2018 à 20 h 15

De 2000 à 3000 saumons d'élevage se sont échappés des installations de l'anse Olive, dans la baie Hermitage,entre le 27 et le 30 juillet dernier.

(7) **Iqaluit wants to pump water from the Apex River as stopgap to water crisis**
Federal government approval needed for emergency water use
CBC News, August 8, 2018 2:00 AM CT

By Michelle Pucci

The City of Iqaluit says it needs to start drawing water from the Apex River soon to avoid a water crisis next spring.

(8) **Le nouveau quai de Percé dans l'Anse-du-Nord?**
C'est un retour à la case départ dans l'élaboration du nouveau quai à Percé, alors que la ville commande une étude de faisabilité pour une toute nouvelle infrastructure non pas à son emplacement actuel, mais dans l'Anse-du-Nord.
Journal le Havre, 7 août 2018 à 23h13

Par Ariane Aubert Bonn et Jean-Philippe Thibault

La première étape de consultation a été menée par le ministère des Pêches et Océans (MPO) auprès des utilisateurs du quai, afin de mettre sur pied un croquis qui corresponde à leurs besoins. Toutefois, le projet qui a été présenté est « inacceptable », selon la mairesse Cathy Poirier. Celle-ci rapporte que l'infrastructure proposée par le fédéral pour cession au provincial est munie d'un enrochement. « Mais ce n'est pas ça le problème majeur », ajoute-t-elle. L'infrastructure, pensée pour durer 50 à 75 ans, ferait six mètres de hauteur. « C'est trois mètres de plus que le quai actuel, ce qui ferait en sorte qu'à certains endroits, sur la promenade qu'on vient de compléter, on ne verrait plus le Rocher », illustre la mairesse. Cette hauteur découle d'une prévision de la montée du niveau des océans, de façon à ce que le quai ne soit jamais submergé. Rappelons que 20 millions de dollars viennent d'être investis dans la promenade, la recharge de plage et les infrastructures environnantes.

(9) **TFN seeks more information before possible seal cull**
Delta Optimist, August 7, 2018 04:35 PM

By Sandor Gyarmati

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The Tsawwassen First Nation wants to take a cautious approach.

(10) **DFO says keep the calls coming, but do it safely**
Coast Reporter, August 7, 2018 04:46 PM

By Sean Eckford

The Department of Fisheries and Oceans (DFO) is eager to get tips from the public about suspected illegal fishing or shellfish harvesting, but it's also warning people against confrontations.

(11) **Canadian Coast Guard Responds to Emergency at Confederation Basin**
Kingston Herald, August 8, 2018

By Steve Gerard

Canadian Coast Guard personnel responded to Confederation Basin over the long weekend to assist a 19-foot vessel reporting engine troubles.

(12) **Search And Rescue From CFB Trenton and Coast Guard Rescue Man And His Dog After Sailing Vessel Runs Aground**
Today's Northumberland, August 8, 2018

On Monday, August 6, 2018 at approximately 4 a.m., the Coast Guard vessel Cape Rescue was dispatched to search for a 29-foot sailing vessel that had run aground with one person on board along with a dog.

Transcripts / Transcriptions : 1

(1) **On behalf of Minister of Fisheries, Oceans and the Canadian Coast Guard Jonathan Wilkinson, Minister of Intergovernmental Affairs and Northern Affairs and Internal Trade Dominic LeBlanc, shares details about the Government of Canada's plan to improve the small craft harbours in Southeast New Brunswick**
August 7, 2018

PRINCIPAL(S)/PRINCIPAUX:

- Minister of Intergovernmental Affairs and Northern Affairs and Internal Trade Dominic LeBlanc;
- Serge Doucet – Regional Director General for Fisheries and Oceans Canada;
- Amy Smith – Spokesperson for the community group

Moderator: Bonjour tout le monde. Good morning everyone. Peut-être qu'on pourrait se rapprocher un peu. On n'est pas à l'école, là.

Hon. D. LeBlanc: Ou l'église.

Serge Doucet: Ou l'église. L'honorable Dominic LeBlanc, ministre des Affaires intergouvernementales et du Nord et du Commerce intérieur. Je pense que c'est la première fois que je te présente de cette manière, Monsieur le Ministre – et député de Beauséjour.

Chers collègues, invités, membres de la presse, dear guests. Good morning and welcome. Je m'appelle Serge Doucet. Je suis directeur général régional du ministère des Pêches et Océans à Moncton et je désire vous souhaiter la bienvenue à cette annonce seulement à deux jours avant le début de la pêche au homard. Avant de débuter, je veux préciser quelques détails en donnant un aperçu du déroulement de l'annonce.

Le ministre LeBlanc procédera à l'annonce au nom du nouveau ministre des Pêches et Océans, l'honorable Jonathan Wilkinson. Par la suite, les médias auront l'occasion de prendre les photos avec le ministre et de s'entretenir avec lui. I'm Serge Doucet. I'm regional director general for Fisheries and Oceans Canada and we are pleased that Minister LeBlanc is here with us today to share some details on some small craft harbour funding. On behalf of Fisheries and Oceans, Minister – Honourable Jonathan Wilkinson. A media scrum will follow Minister LeBlanc's announcement. Sans plus tarder, c'est un plaisir de moi de vous présenter le ministre des Affaires intergouvernementales du Nord et du Commerce intérieur et le député de Beauséjour, notre ancien ministre l'honorable Dominic LeBlanc

Hon. D. LeBlanc: Merci Serge. Merci beaucoup, Serge. Why, it's quite a mouthful that title, isn't it? It's a new title, Intergovernmental Affairs, Northern Affairs. C'est pas le nord du Nouveau-Brunswick, c'est les territoires du Nord. C'est le nord du Québec pis c'est Labrador et je dois aller à Yellowknife, Iqaluit pis Whitehorse dans 10 jours. Je vais traverser le

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Nord canadien pour rencontrer ces trois premiers ministres des territoires du Nord. Alors merci, Serge, pour cette introduction. Et surtout toi, Serge, Michel et d'autres, merci pour le travail que vous faites quotidiennement.

Moi, j'ai eu le privilège de voir que beaucoup de mes amis pêcheurs sont ici ce matin. Serge is right. It's a couple of days before the beginning of the season. The spring season was very positive we hope in spite of the interaction with submarine mammal. Maybe you heard about it. Some people were bumping into whales in certain fishing areas and we had a difficult spring season. It hasn't been the case in the Northumberland Straight so we hope and believe that it'll be an easier time in the fall season.

But as Serge said, there is a remarkable group of women and men who work at the Department of Fisheries and Oceans. It's sort of sad for me, Serge, to say my former department. It feels kind of weird. It really hasn't sunk in yet. I just finished two weeks of holidays. We stayed in Grande-Digue but I'm sort of back at work this week and I've got to go to Ottawa tomorrow. So it'll probably sink in tomorrow when I'm back in Ottawa.

But it's a privilege to be here with all of you. Et comme j'ai dit, en anglais, surtout les pêcheurs qui travaillent bénévolement sur les comités d'autorité portuaire, qui travaillent franchement d'une façon remarquable afin de maintenir les installations portuaires. Je vois un groupe de gens – Fernand Robichaud (ph) de la région de Cormierville. Ça fait 10-15 ans que je rencontre Fernand, qu'on parle du quai de Cormierville. C'est un exemple parmi tant d'autres. Et moi je suis très content de vous revoir et très content de vous donner un peu les détails des 10 millions de dollars qu'on va dépenser cette année et l'année prochaine à réparer les quais dans le sud-est du Nouveau-Brunswick.

So, I'm excited to be here. I'm also very happy that my friend Jacques LeBlanc joined us. In case you missed it, he's got an ego problem. He has to put his huge face on that car. Like I don't know what's going on, Jacques. Maybe Denise (ph) doesn't remember who you are. There's some problem, but Jacques has been a terrific mayor of Shediac. He's been a friend of mine for a long time. He's been involved in the community. He's a candidate in the provincial election which is just a little over a month from now in Shediac-Beaubassin-Cap-Pelé. So it's a privilege, Jacques, to have you here and thank you for the work you've done and you'll continue to do for the people of this area.

Pour moi, c'est un plaisir de travailler avec toi pis j'ai hâte de continuer notre collaboration ensemble. As Serge said, I wanted to come to Robichaud to announce, as I said, a 10 million dollar investment on a series of fishing harbours and wharfs around south-eastern New Brunswick. So the total amount of money that will be spent this year and next year is over 10 million dollars. I wanted to come to Robichaud for a specific reason and I mentioned to Amy and to Alain (ph) and to others and I'll tell you about that in a moment.

But as all of you know, in 2016 – think about this. In 2016, the commercial fishing industry in Canada landed 3.4 billion dollars of product. So, en 2016, la valeur des prises des débarquements sur des quais comme ici ou partout à travers le pays ont (sic) été proche de 3,5 milliards de dollars.

Forty-four thousand people and 44,000 families in many cases earn their living in the fishing sector. So 44,000 Canadians earn their living from the commercial fisheries. And I see the president of the Maritime Fishermen Union, my friend Carl (ph) who is here. Those are the harvesters. They're the crew members that work on the fishing boats and they're also the people who work in the processing sectors, but there's also the spinoffs. And I've said to Carl and to others, if you think about the money that the fishery generates, ça crée de l'activité économique dans des endroits où souvent il y a pas d'autre activité économique.

Et vous connaissez mieux que moi l'importance d'avoir un bon revenu de la pêche, d'avoir des bonnes prises, un prix raisonnable, parce que l'argent que vous faites circule dans nos communautés. C'est ça l'argent que vous utilisez pour acheter de l'équipement, pour remplacer de l'équipement, pour embaucher des gens qui travaillent avec vous ou pour faire la vie économique de vos familles. Et c'est pourquoi c'est tellement important qu'on vous donne l'infrastructure nécessaire pour que vous pourriez gagner votre vie.

So one of the important parts of that three-and-a-half billion dollar industry is to have infrastructure. Small craft harbours, des quais de pêcheur, qui sont d'une qualité acceptable, qui sont sécuritaires et qui vont permettre aux pêcheurs, à leurs membres d'équipage de faire en sorte qu'ils peuvent gagner leur vie et circuler l'argent dans l'économie de nos régions.

Across the country, there are more than 1,000 fishing harbours that the government of Canada is responsible for, 1,000, We were successful in the budget this year, in the federal budget of February or March, a few months ago, to get another quarter of a billion dollars, 250 million dollars additional money on top of the 100 million dollars that the government spends every year in fishing harbours So think about that. The total budget across the country is 100 million dollars every year. It's not a lot of money when you think about a 1,000 harbours. And I look at the faces of the fishermen here.

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Les projets qu'on veut faire que ce soit le projet de dragage au Petit-Cap. On parlait de ça. Ça s'élève à un demi-million de dollars pour arranger l'intérieur du quai de Petit-Cap. Ça, c'est l'exemple d'un projet qu'on va faire cette année.

Mais that 100 million dollars does not go very far across the country. That's why we convinced the Prime Minister, the Minister of Finance to add 250 million additional dollars and that allowed us over this year and next year, that 250 million dollars is available this year and next year on top of the 100 million every year and that's what allowed us frankly to catch up on a number of projects that should have been done some years ago. So that's why I was particularly excited when I was the Minister of Fisheries and Oceans to have gotten that money from the Prime Minister, from the Minister of Finance and I had a certain pleasure of sitting down with the list of harbours across the country and deciding which ones would be a priority for that money and that's why we are here today.

I wanted to tell you – une dernière chose avant que je vais un peu décrire les projets qu'on va faire. Il y a plus de 5 000 bénévoles à travers le Canada qui travaillent sur ces quais de pêcheurs, sur les comités d'autorité portuaire. C'est une armée de personnes qui travaille bénévolement afin de contribuer à l'amélioration de leur infrastructure portuaire et de la vie économique de leurs familles. Mais si on demande à des bénévoles comme beaucoup d'entre vous qui travaillent sur les comités portuaires, sur les autorités portuaires, qui font du travail bénévole afin d'améliorer les quais, ben vous pouvez – c'est une chose de travailler bénévolement, mais vous pouvez pas vous-mêmes trouver des millions de dollars pour faire les projets qui sont nécessaires et qui sont nécessaires comme j'ai dit depuis très longtemps.

So, in south-eastern New Brunswick which is a series of wharfs from Cape Tormentine up to Cap-Saint-Louis. Those are the fishing harbours in my constituency. There are 17 of them. We are investing this year and next year over 10 million dollars in improving these wharfs. And as I said earlier, a number of projects have been specifically identified and will be going out to tender in the coming weeks. For example, there is a multimillion dollar project.

I see Cyril (ph) and others here from the Elsipogtog, Richibucto area. There's a perfect example. That's the busiest harbour in my constituency. It's a place where millions of dollars of lobsters have been landed. Indigenous fishermen, non-indigenous fishermen working together. It's been a source for me of great reward to see how that has developed. So this year there is a major reconstruction that will start, Cyril, of over 3 million dollars and the department will be working with you and the local harbour manager and the harbour authority in the coming weeks to identify those details.

On va faire finalement un projet de dragage. Je vois mes amis de Cormierville. On va arranger l'intérieur du quai de Cormierville. On va faire un gros projet de dragage, dredging on the basin at the Cormierville wharf. I'm dying to give you the amounts of money. I see that the seats. I look at Michel (ph). I look at Serge. I'm not supposed to tell you the amounts of money that have been allocated. I can give you the total of 10 million, but because these projects go out to tender if we say that we're going to spend three point whatever million over two year in Richibucto, well, you can bet that the contractor who will submit proposals is not going to come in below that.

So all of you are taxpayers too so if you're wondering why I'm not giving you the exact amounts that we think that the engineers think these projects will cost, it's because we want to be the best managers of your tax dollars as we can. If some contractor comes in with a proposal that does exactly the work the engineers and the harbour authorities want and it's 300,000 dollars less than we thought well then we can use that money somewhere else to fix up another harbour. So that's why I'm not supposed to go harbour by harbour and tell you for example about the half-a-million dollar project in Petit-Cap for the dredging, just as an example. That was a joke. But there, that's the amount of money.

Alors voilà. And we don't want to talk like we're in Robichaud, Serge. We don't want to say that, you know, it's a few million dollars that we're putting aside to fix up this wharf, because we shouldn't do that because it's going to go out to tender. So —

Qu'est-ce qu'on va faire à travers la région? On va arranger l'approche du quai de Cap-Saint-Louis. Il y a un projet de dragage encore qui est nécessaire pour l'entrée du quai de Cap-Saint-Louis. On va finir la construction. Je vois mes amis de Grande-Digue ici, Marc (ph) et d'autres. On va finir le projet. Moi, j'ai été le voir cette semaine. Le projet du quai à Casey Cape (ph) pis à Grande-Digue, le contrat a été donné pour faire la rampe, finir le projet du *slip*, l'entrée, et ce sera fini cet automne. Ce contrat-là est déjà en place. C'était la partie manquante du projet extraordinaire que vous avez fait à reconstruire le quai. J'ai même aimé la lumière que vous avez mise là. C'est vraiment bien.

Mais on va finir la rampe. Le *slip* sera fait dans les prochaines semaines. On va ensuite à Cap-Lumière. On a un projet de reconstruction majeur à Cap-Lumière, à Richibucto Village. On va enlever les *floating docks*. On va refaire la partie du quai à l'intérieur du port de Cap-Lumière. Ç'aurait dû être un quai permanent et pas des *floating docks*. Ce sera fini le projet de reconstruire à l'intérieur et il y aura aussi un projet de dragage, un *dredging project*, qui sera complété pour l'entrée de Cap-Lumière. Même chose à Sharpish (ph). L'entrée —

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Some of these have already been done, were done a month or two ago. That forms the total of 10 million dollars, but channel entrance dredging is a problem and that's why it's being done in Sharpish. It's also being done au quai des Aboiteaux à Capelet. On a un projet important pour clairer, pour enlever qu'est-ce qui à l'entrée du quai des Aboiteaux. Et comme j'ai mentionné à Petit-Cap on va faire un projet important de dragage à l'intérieur du quai, arranger ça pour plusieurs années parce qu'il y a pas assez d'eau à l'intérieur du quai. Ce projet-là sera fait dans les prochains mois aussi.

And finally, the reason I wanted to come to Robichaud this morning is this is a perfect example where the government can divest a wharf. How many times with Ron Cormier (ph), a bunch of others did we talk about the conditions of this wharf for the last 10 years or 15 years. And we know the damage that this what, the damage that this wharf suffered in a storm a few years ago. It no longer qualifies as a core fishing harbour in terms of what the government of Canada wanted to do. So, the government of Canada was faced with a decision and a remarkable group of local community leaders came together.

Moi, j'ai eu la chance avec Amy, avec Alain et bien d'autres de rencontrer un groupe de bénévoles qui ont travaillé avec le ministère des Pêches et Océans. Et ça, Serge, je te remercie parce que tes collègues au port et petites infrastructures ont travaillé avec le groupe d'Amy pour plusieurs années afin d'élaborer un projet et afin de faire en sorte qu'on peut investir cette année et l'année prochaine plusieurs millions de dollars afin qu'on arrange le quai de Robichaud, et ensuite on va le transférer à la communauté.

So, this is an example where the government of Canada will spend over the next couple of years a number of millions of dollars to fix up the wharf in Robichaud and then transfer it to a local community group. Amy and others – Amy Boudreault (ph) and others have been working for a number of years on this plan with the department and that's why I wanted to come to Robichaud because this was an important place to show Canadians that we can take government of Canada money.

We can invest it over this year and next year to fix up this wharf in the condition that it can be in, for the community to benefit from it for years to come. But then the government will transfer the wharf, will transfer the ownership of the wharf to a community group, a group of volunteers who've been working on this project for a number of years and then they will and the community will own and manage this harbour going forward.

But we're going to spend over the next two years a considerable amount of money to ensure that it's in the shape, that it will last. It will be protected. It will be rebuilt and protected in a way that the local community will be able to benefit from it for years to come and there's no better group of – an example of a better group of people who've worked as volunteers to fix up harbours like this and to build harbours like this and have taken time to work with the department.

And today, I'm happy to announce in Robichaud the money has been set aside. The project will go ahead. We're going to finalize an agreement in the coming weeks with the local committee and that's why I thought it would be interesting to ask Amy to say a few words on behalf of the local group in Robichaud here that have worked so hard to make that possible and that's why I wanted to come to Robichaud. I sort of couldn't resist. I gave Amy and Alain and others the good news a few weeks ago when we met in Shediac, but I wanted to come here on this beautiful morning. Amy, why don't you come and say a few words as well. Merci beaucoup.

Amy Smith: Thank you, Dominic. So, welcome everyone. I just want to start by saying thank you. I just wanted to start by saying thank you for everybody for taking the time to, you know, show your support. Special thank you to the Honourable Dominic LeBlanc for believing in us, you know, from the beginning over two years ago when we started this process. If we didn't have you believing in our group and supporting us through the process, you know, we wouldn't be here today.

Also, I want mention the collaborate effort from the committee, the committee that we have put together and now is a planning committee that is forming a board to have this project go through. And I also want to mention Tim Lyon (ph) played a really good – a really important role in having this project kick-started. He was the one that initially extended a helping hand to get this campaign started. So sometimes if you don't have, you know, the one person that gives you that push and guidance to, you know, show you the way, things don't get done.

So, very much appreciated. The community support has been very great and I just want to show my appreciation. It might have taken over two years to get here, but definitely worth all the challenges and, you know, the bumps in the road that we had to go through. So this wharf has been, you know, part of our community for decades and many generations. And so I was asked to say a few words about you know this means to us.

So, as a necessity for fishermen providing for their families, as a meeting place that connect and socialize, many memories of all different leisure activities that a wharf offers. There has been, you know, lots of laughs, sweat and tears

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shared over the years to upkeep and operate this wharf. I'm sure a lot of people can relate. A lot of families in the community, you know, for mine especially, like it's part of my youth, you know, like I have lots and lots of memories on this wharf and doing fundraising. And so on a personal note, the motivation behind kick-starting this campaign is the giving and fighting, you know, for what you're passionate about and what's special to you and your loved ones.

My dad, Alain Boudreault, a fisherman will follow in his late father's footsteps, takes pride and has a passion for fishing. So getting this wharf repaired was a challenge he tried to overcome on his own but he kept hitting walls. So you know, my dad is a true fighter in so many ways. He's been there for me numerous times to make sure I kept fighting through the challenges to reach my goals and dreams. So getting this wharf repaired met so much to him that you know he was ready to give up like a couple of years ago just because he wasn't getting anywhere with it. So I saw the opportunity to be there for him and to make sure that he kept fighting.

This wharf getting repaired is like reviving a piece of our history and giving us the change to create more memories now and for future generations. So I'm just going to mention a little about where we are in the process, I guess, and what plans are looking like. There's nothing finalized and in concrete, but we've made big progress. So like Dominic mentioned, you know, we're finalizing the agreement in the next few weeks and the plan for this wharf is, you know, number one is to repair it and make it a safe structure for, you know, about five to six commercial fishing docks for the existing fishermen peer.

And we're also looking to be able to put about 30 pressure buoy (sic) docks with floating docks and basically also adding activities that will generate revenue. So we want to make sure that we do something that will generate enough revenue to maintain and operate this wharf for years to come. So we have a lot of ideas coming to the table. We're kind of brainstorming and making sure that we're making the right decisions on how we're going to move forward.
So, that's pretty much where we're at. So it's a great news and we're very excited but it's finally happening and we look forward to working with who we've been working with to get this done.

Hon. D. LeBlanc: Merci, Amy.

Serge Doucet: Merci beaucoup, Amy. Again, as the Minister indicated earlier on, it's a great example of collaborative effort to ensure that there is infrastructure available not only for the commercial fishermen, but for the community as a whole. So we're very happy and thank you for all your efforts. So at this point, this concludes this morning's announcement. The media scrum will take place after the photo opportunity with the Minister. So I believe Michel will be – set up a little bit of a photo op area and then we'll give you a chance to ask a few questions to the Minister. Merci beaucoup.

Hon. D. LeBlanc: Merci, Serge.

(Photo op)

Question: (inaudible – crosstalk) from this year and next year so that'll be a total of 10 million or (inaudible – crosstalk)?

Hon. D. LeBlanc: No, it's a total of 10 million dollars spent this year and next year because some projects for example will start this fall and some will finish in April or May before the lobster season next year. Certain projects are better done in the winter if you're working to fix a breakwater. Right now, the lobster season starts this week so it's probably not a good time to repair the wharf this week. You probably want to wait until later in October. That's why they do them over two years but a lot of that money will be spent this year, this financial year between now and March 31st and the remainder will be spent by this time next year.

Question: So it sounds like an even break like five this year.

Hon. D. LeBlanc: No, no, it's half a million dollars of dredging can be done in November that will be done in one shot, for example.

Question: And what (inaudible – technical) Cape Tormentine what wharfs will be receiving these improvements?

Hon. D. LeBlanc: So we'll give – I'll make sure Michel gets you the list. I went through the list in my riding, in my constituency. The wharfs start in Cape Tormentine and run up to Cap-Saint-Louis in Kent County, but there is a list of seven or eight that are receiving as 10 million dollars. I'll make sure you get the news release. Dan will get you the news release.

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Question: And some have already started some of these improvements?

Hon. D. LeBlanc: The only ones that have started were some of the small channel dredging projects where every year they have to dredge the opening of a harbour in Cottomy Ville (ph) or in Cap-Saint-Louis. A number of these are annual projects and obviously they had to be done before the lobster season starts this week. But the major construction projects and the major dredging projects will start in the coming weeks.

Question: Like aside from dredging what other improvements will be made to these harbours – I mean wharfs?

Hon. D. LeBlanc: So a good example and that's why I wanted to come here to Robichaud, they will be rebuilding the entire face of this wharf behind us and they will be redoing the breakwater, the protection. Because it's one thing to spend a million or 2 million dollars to fix up the wharf, but if you don't spend the extra money necessary to protect it with armoured stone or a breakwater then another storm will happen and it will get destroyed.

So in Richibucto for example there'll be a major reconstruction of a significant part of the wharf in Richibucto, in Cap-Lumière and Richibucto Village. Again there's a major centrepiece of the wharf that's being rebuilt and some are dredging projects. But one of the most significant projects will be here in Robichaud where over the next couple of years a few million dollars will be spent to completely rebuild this wharf and then do the protection necessary to breakwater. And then transfer to the community. Then the government will transfer the wharf to a group of volunteers who will then be responsible for managing it.

Question: Est-ce qu'on – de voir ce brise-lame. C'est pas le plus gros de la région mais est-ce que c'est important pour le gouvernement fédéral de (inaudible – crosstalk)?

Hon. D. LeBlanc: Ben, le quai de Robichaud pis ç'a été d'ailleurs dans beaucoup de médias y compris dans les nouvelles à plusieurs reprises. Quand il y a eu la tempête il y a quelques années pis le quai a été rendu – vous voyez toute la partie qui est fermée – le quai a été rendu effectivement pas utilisable. Il y avait beaucoup, beaucoup de gens dans la région de Robichaud, de Barachois qui ont demandé au gouvernement d'arranger le quai sur une base beaucoup plus à long terme. Nous avons dit en termes de pêche commerciale c'était plus – il y avait plus assez de pêcheurs. Il y avait pas suffisamment de pêcheurs commercials (sic) pour justifier des millions de dollars d'investissement quand il y a des quais très proches.

Alors là il y avait un groupe de bénévoles. Vous avez entendu Amy tantôt. Il y a un groupe de bénévoles qui se sont mis ensemble pis qui ont dit, okay, nous autres on va former un comité et nous autres on est prêts à prendre possession du quai, le titre légal du quai, après que c'est arrangé. Alors là, le compromis était d'arranger le quai, de dépenser l'argent afin que ce soit tout reconstruit et protégé à long terme et ensuite on va le transférer et un groupe de bénévoles seront responsables à ce moment-là de le gérer. Ils vont faire place pour des pêcheurs commerciaux. Comme elle a dit, il y a cinq, six pêcheurs qui vont utiliser le port, mais ça va leur permettre d'avoir une trentaine de bateaux de plaisance et ça, ça va générer un revenu pour le comité et pour la communauté de garder le quai dans un état important.

Question: Dominic, when asked about Parlee Beach, it's in your backyard. It's been closed all weekend, closed again today for swimming. How concerned are you about the conditions at that beach?

Hon. D. LeBlanc: I'm obviously concerned when public health authorities have to close a tourist infrastructure as important at Parlee Beach. It's a critical piece of the summer economy I would say not only for south-eastern New Brunswick but for the whole province. So I'm certainly happy to work as the government of Canada with the province with the Greater Shediac Sewage Commission, with resident groups to ensure that all of the necessary improvements are in place so that the factors that are contributing to this circumstance are quickly concluded.

Question: About the reputation of Parlee, has it been damaged by you know what's going on?

Hon. D. LeBlanc: Certainly local residents are concerned and that kind of publicity isn't helpful for tourism promotion. However, I've noticed in some tourist promotions that Parlee Beach was ranked as one of the best beaches in Canada and in North America. So the public perception isn't only negative. It still is a very, very attractive tourist destination with a huge potential, but it's now incumbent on governments to work together to put in place the measures necessary so that this circumstance does not continued. And I'm prepared to use federal government money in partnership with the Sewage Commission, with the province to do what's necessary.

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Question: I guess anecdotally it would seem that beach goers are moving up to Aboiteau et Cap-Pelé. Is there a concern that they might not head back to Parlee Beach once this is (inaudible)?

Hon. D. LeBlanc: No, Parlee Beach will always be an anchor for the tourism industry. It's a provincial park. It's been there for a great number of years. But you're right. We've also seen even in Casey Cape (ph) near my house or the Richibucto Dunes or l'Aboiteau Beach, there have been a lot of people going to different spots. And that's not only this year. That tendency has existed over the last number of years. I also think there are more tourists in the area. So we're attracting more people from Quebec, from Ontario, people who traditionally may have gone to the United States are deciding to come to Atlantic Canada.

I see it with my own friends and family members, and tourist operators are telling me that they're seeing encouraging signs of increased numbers. So my hope is that we encourage enough tourists to support all of the beaches in the area that have made considerable investments and improving their infrastructure.

Question: Minister LeBlanc, going to this funding for the small (inaudible). Where is it coming from, the money, and does it tie to any condition or something?

Hon. D. LeBlanc: So it's money that's spent by the Department of Fisheries and Oceans through a program called the Small Craft Harbours Program specifically designed to improve fishing infrastructures for commercial fisheries purposes. As I said, it's a program that spends about a 100 million dollars every year improving the harbours, but the reason we were able to do projects that like one here in Robichaud, like one of the ones in Richibucto, like some of the dredging projects is because we got an additional quarter of a billion dollars of additional funding this year and next year, over the next two years, to frankly catch up on a lot of projects that hadn't been – weren't possible because a 100 million dollars in a thousand harbours across the country isn't enough money.

So this year or next year we'll be spending 450 million dollars, combined this year and next year. That's almost half a billion dollars and that's why expensive projects like the one here in Robichaud are now possible.

Question: And this (inaudible) small craft harbours are going on primarily throughout south-eastern New Brunswick – regions that are southeast of New Brunswick?

Hon. D. LeBlanc: Right. So that – the 10 million that I announced this morning is for south-eastern New Brunswick. My colleague, Serge Cormier, who is the MP for Acadie-Bathurst announced one project that I was at with him in the end of June. In north-eastern New Brunswick. I think he's doing other announcements. The same thing Pat Finnigan, Karen Ludwig I know has a number of projects in south-western New Brunswick. So I'm just announcing the ones in my constituency. My colleagues will be rolling out and have been rolling out. I haven't seen the list of when they've been doing them, but a number of them have already come out.

Question: And I guess then another question – why do this? I know you've mentioned some stats off the top during your announcement. I mean like about the economic contribution fisheries and everything like that. What do they say and why now?

Hon. D. LeBlanc: It should have been done years ago. These are projects that I have wanted to do as a Member of Parliament for many years. So better late than never. We were able to get this additional funding as I said and this funding is what has allowed us to catch up on some that have been delayed for many years. And take a place like Robichaud. You heard Amy in her own words for the people who live in this community, for the people who live in this community, this is an important part of their community infrastructure and it – if you just look at the fence behind us, it's no longer serviceable. It's no longer useable. So why not take advantage of this additional funding now to do projects like this one and sure it could have been done several years ago.

Question: This is taking in effect now. The moneys are already being used as we speak?

Hon. D. LeBlanc: Yes, the funding has been formally committed. So what's going to happen is the Department of Fisheries and Oceans and the Department of Public Services and Procurement will be going through a tender process, because these projects necessarily go to tender and people will be bidding on these projects in the coming weeks and some of the work will start very soon.

Question: How many projects are we talking here? I don't know if you can speak to that.

Hon. D. LeBlanc: I'll make sure Michel – we have the list and news release that list the actual projects. I want to make sure you get it.

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Media Relations: Yes.

Hon. D. LeBlanc: Okay, super, because that will have the list of the actual projects.

Question: Thanks a lot.

Hon. D. LeBlanc: Pleasure. Nice to see you. Thank you. Bye, thanks. Hey, comment ça va?

Unknown Male Voice: Ça va bien. Et toi?

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s.21(1)(a) s.21(1)(b)

Mbarushimana, Jenny

From: Malikian, Janine
Sent: August-08-18 4:09 PM
To: Davis, Neil
Subject: RE: CTV media call -- Media line for approval
Attachments: ML_SRKW_J50-TRACKED-NHQ.docx

Importance: High

Thanks for your edits on these bullets Neil.

On a similar note, we received from NHQ Comms a revised version of the complete media lines that we sent them earlier (revised version attached). This version includes the original of the bullets below. I will replace those with the approved ones.

Can you let me know of any other concerns by 4:30 if possible?

FYI, I'm going to send you a separate media request about the permitting aspect.

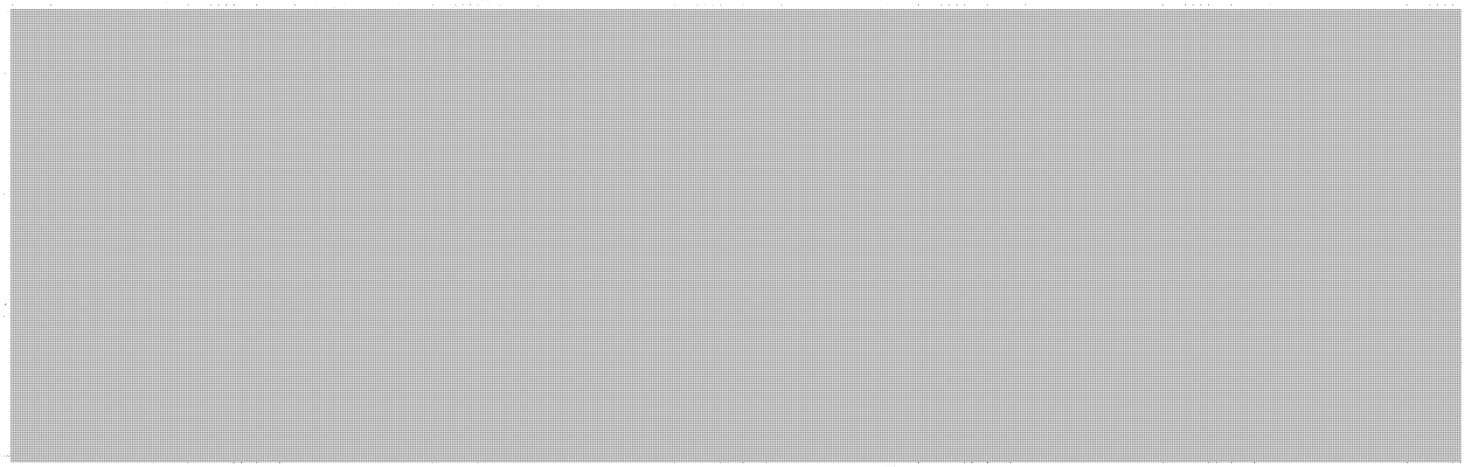
Thanks,

Janine

From: Davis, Neil
Sent: August-08-18 2:13 PM
To: Malikian, Janine
Cc: Lowe, Carmel; Lowe, Carmel; Girouard, Louise; Kennedy, Eddy; Thomson, Andrew
Subject: RE: CTV media call -- Media line for approval

Janine,

Revised lines below. These were also sent out for review w/in Science and EMB at NHQ. Julie Stewart has forwarded me NHQ EMB edits. I've incorporated them and made some further revisions. Carmel's team may want to review these too.



From: Malikian, Janine
Sent: Wednesday, August 8, 2018 1:42 PM

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: FW: CTV media call -- Media line for approval
Importance: High

Hi Neil,

Please see proposed response below re: J50 permits for a media request sent to MinO.

Any major concerns? This is moving very quickly, so appreciate your response ASAP.

Thanks,

Janine

From: Jackson, Ashley
Sent: August-08-18 1:37 PM
To: Smith, Kathleen; Girouard, Louise; Malikian, Janine; Northcott, Jennifer
Cc: Saindon, Carole; McElhone, Kathryn; Morris, Christina
Subject: RE: CTV media call -- Media line for approval

Sorry all. Revised slightly.

ISSUE: [redacted] CTV News is asking for a statement or comment from the Fisheries Minister regarding J50. Paul Cottrell has repeated said that permits are not currently in place to give J50 antibiotics via syringe or to feed her live chinook. He said no application has been made yet for such steps, and an application is needed before those steps could be affected. On the other hand, permits to do those things are in place in the States.

My question is: why has the Canadian government not approved those steps, or provided permits or encouraged application for a permit (when the NOAA in the States has)?

DEADLINE: 3-3:30 pm PST.

APPROVED BY:

PROPOSED RESPONSE:

[redacted]

From: Jackson, Ashley
Sent: August-08-18 4:31 PM
To: Smith, Kathleen; Girouard, Louise; Malikian, Janine; Northcott, Jennifer

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Cc: Saindon, Carole; McElhone, Kathryn; Morris, Christina
Subject: CTV media call -- Media line for approval

Hi there,
I just got a call from Vance -- they have a call in MINO about clarifying our position on permits. I would recommend the following line. Can all of you circulate for concurrent approvals ASAP so that Vance can get back to the reporter by their 5:30 deadline. Carole can you follow up with Vance with more details while we run approvals?

Proposed response:

[redacted]

Ashley Jackson

Communications Manager, Fisheries and Harbour Management
Fisheries and Oceans Canada / Government of Canada
ashley.jackson@dfo-mpo.gc.ca / Cel: [redacted]

Gestionnaire des communications, Gestion des pêches et des ports
Pêches et Océans Canada / Gouvernement du Canada
ashley.jackson@dfp-mpo.gc.ca / Tél. Cell. : [redacted]

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s.21(1)(a)

s.21(1)(b)

DRAFT

Media Lines
Southern Resident Killer Whale J50

[redacted]

Pages 1922 to / à 1924
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

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Mbarushimana, Jenny

From: Cottrell, Paul
Sent: August-08-18 10:19 PM
To: Davis, Neil; Thomson, Andrew
Cc: Harber, Lee
Subject: Fw: Action Plan for J50
Attachments: DFO_Application J50.docx

Hi Guys,
Request from NOAA. We have a SARA/section 52 application on-line which proponents usually fill out. I am sending them a link.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Teri Rowles - NOAA Federal [redacted]
Sent: Wednesday, August 8, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

THANK YOU

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Application to conduct marine mammal emergency response activities in Canadian Waters

J50, a 4 year old endangered Southern resident killer whale, has presented in declining health. Additional background information on J50 is available upon request.

In order to better understand the health status of J50, a veterinary health assessment and sample collection is needed. This assessment may be conducted in U.S. waters (all activities are currently permitted), but the response would be significantly improved if the assessment team could conduct activities in Canadian waters as the whales move across the border. All assessment activities in Canada will be conducted in consultation with DFO.

For the initial veterinary health assessment, and sample collection, the following activities are proposed (in priority order):

1. Collection of breath/blow sample
2. Collection of fecal sample
3. Collection of other samples opportunistically available (e.g., mucus and skin).
4. If skin discoloration is noted, collection of skin scrapings from discolored area.
5. Completion of a visual veterinary health assessment and photo/video documentation.
6. Providing antibiotic treatment from the NWFSC boat via pole syringe or remote delivery.

All samples will be collected by a response team on a single boat (a NOAA vessel). The composition of the team will vary depending upon the day, but a complete list of potential personnel is below.

Additional information for each activity

1. Respiratory samples will be collected via petri dishes mounted on the end of a carbon fiber pole held just over the blowhole. The vessel closely approaches the whale to within the reach of the pole (5 meters or less), perpendicular to the whale, and the pole is lowered over the blowhole to catch the expired air. Respiratory samples taken will be analyzed for potential pathogens and other health indicators using cytology, culture and molecular methods.
   RISKS:
   - Close approach could result in possible vessel strike. Mitigation measure: Experienced personnel with a vessel equipped for close approach and this type of work.
   - Use of poles in close proximity to the whale could result in physical contact with sampling equipment. Mitigation measure: Experienced personnel with extensive experience and used successfully in the past.
   - Close approach and respiratory sample collection could result in possible disturbance to other pod members. This disturbance is expected to be temporary and minimal. Mitigation measure: Experienced observers, pre and post approach monitoring.
   - We will make note of any disturbance or behavioral changes or reactions.

2. Fecal samples will be collected opportunistically whenever possible when visually detected floating on the water. Fecal samples collected this way can yield anaylses of nutrition, hormones (e.g.,

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stress, reproductive), toxins, and DNA (to identify subject whale and prey species). Small fecal samples will be collected on sterile gauze sealed in zip locks and placed immediately in cool storage. Larger fecal samples will be collected in tubes and immediately placed in a cooler. Note: while all efforts will be made to collect feces from J-50, identification of which animal defecated is not always immediately possible in the field, and any available sample will be collected.

RISKS:

- Close approach provides the same risks outlined above. No additional risks are anticipated.

3. Mucus samples will be collected opportunistically whenever possible when visually detected floating on the water. Mucus samples can yield analyses of hormones and pathogens, among others. Mucus samples will be collected on sterile gauze and placed in cold storage. Note: while all efforts will be made to collect mucus from J-50, identification of which animal the mucus is from may not always be immediately possible in the field, and any available sample will be collected.

   RISKS:

   - Close approach provides the same risks outlined above. No additional risks are anticipated.

4. If skin discolorations or abnormalities are observed (as has been previously noted caudal to the blowhole and on the flukes), skin samples will be obtained through a roughened collector (dish scrubbie or similar) on the end of a 5 m pole. The vessel closely approaches the whale to within the reach of the pole (5 meters or less), perpendicular to the whale, and the pole is lowered into contact with the discolored skin. Skin scrape samples will be analyzed to identify potential pathogens.

   RISKS:

   - Close approach provides the same risks outlined above. No additional risks are anticipated.
   - Contact between the sampling pole and the whale will result in minor skin abrasions, which could cause swelling. Impacts are expected to be short-lived and minor. Mitigation measure: Experienced personnel and equipment has been used successfully in the past.

5. Veterinary health assessment is conducted visually by a veterinarian, with photo and video documentation. This assessment will likely be conducted simultaneously with the close approaches to collect the samples listed above, and would likely not require additional approaches. Health assessment will include observations of body condition and behavior, from various marine vessels, drone observations, and from shore (when possible). Photos (high resolution) and video (1080p and greater resolution) will be collected from all platforms utilized, and images will be used for comparisons and ongoing assessment. Behavioral patterns will be monitored as often as possible throughout the response. Behavioral ethograms may be developed for this purpose with a dedicated observer collecting this data for future analysis. Parameters that will be monitored and recorded include:

   - Respiratory rate (# respirations/5 minutes)
   - Blow odor
   - Defecation frequency
   - Position and distance relative to J16 (or other closely associated pod members)
   - Foraging activity; % time spent logging

   RISKS:

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- Close approach provides the same risks outlined above. No additional risks are anticipated.
- Photo documentation involves no anticipated risks.

6. Initial medical treatment via delivery of antibiotics by injection, either via pole syringe or remote delivery dart system. Injections will be administered into the epaxial or other large muscle mass. Needle length will be approximately 2". All injections will be supervised by a veterinarian. Medications List In Order Of Priority (as advised by veterinary team). The antibiotics on this list are intended to address the range of bacterial infections J50 is susceptible to.

   - 2000-3000mg Convenia, SQ or IM once (600kg x 5 mg/kg) – one dose would provide 7-14 days efficacy; or
   - 2000-3000 mg Excede SQ or IM once (600kg x 5 mg/kg) – one dose would provide 5-10 days efficacy

   *Antibiotic drug choice may change based on diagnostic findings. Any new drug choices & dosages will be provided to DFO as needed prior to use.
   RISKS:
   - Close approach provides the same risks outlined above.
   - Medication injections may have side effects including result in potential abscess, localized pain and inflammation. This is expected to be temporary and localized. More serious side effects such as muscle necrosis are possible but unlikely. Mitigation measure: Experienced personnel with significant experience and appropriate equipment choice.
   - Excede and Convenia are both third generation cephalosporins and adverse effects are not serious and have a relatively low frequency of occurrence.

RESPONSE PERSONEL

The following personnel will be involved in this response at varying points, though the exact configuration of personnel on each boat at any given time will shift depending on needs of the effort and the availability of the individuals involved.

Dr. Joe Gaydos (SeaDoc) Health assessment including diagnostics and medical treatment
Dr. Jim McBain (Sea World) Health assessment including diagnostics and medical treatment
Dr. Hendrik Nollens (Sea World) Health assessment including diagnostics and medical treatment
Dr. Martin Haulena (Vancouver Aquarium) Health assessment including diagnostics and medical treatment
Dr. Brad Hanson (NOAA) Sample collection and vessel driver
Candice Emmons (NOAA) Sample collection and vessel driver
Jeff Foster (Whale Sanctuary Project) Sample collection and vessel driver
Katy Foster (Whale Sanctuary Project) Sample collection and vessel driver
Trevor Foster (research tech) Sample collection and vessel driver

*A staff member will be identified for photo and/or video documentation.

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Dozie, Juachi

From: Harber, Lee
Sent: August-08-18 1:07 PM
To: Leslie, Karen; Brekke, Heather; Gallant, Nicole; MacConnachie, Sean; Eros, Carole; Moore, Kendra; Johansen, Jeff; Spence, Brenda; Cottrell, Paul; Nener, Jennifer; Cauffope, Genevieve; Galbraith, Ryan; Ho, Agatha; Hayes, Trish; Chmelnitsky, Elly; Malikian, Janine; Thar, Jonathan; Silverstein, Adam; Smith, Ken
Cc: Thomson, Andrew; Davis, Neil; Webb, Cheryl
Subject: Weekly SRKW OPS Committee
Attachments: SRKW Operations Committee - Minute August 2.docx

Hi folks,

Please find attached meeting notes from last week's call, they can also be found on the regional share drive: \\Dcbcvanna01b\VAN_RHQ_1\Region\FAM\SRKW OPS Committee

Agenda for tomorrow:

- J50 (Neil/Paul)
- SRKW IMSAG (Lee)
- RKW amended recovery strategy (Heather)
- Communications (Janine)
- Roundtable

Please send me a quick email if you would like to add an agenda item.

Thank you

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

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SRKW Operations Committee – Meeting Notes
August 2 (Thursday)

Agenda

1. Update: SRKW Advisory Group (lee)
2. Roundtable (all)

1. Debrief: SRKW Indigenous and Multi-Stakeholder Advisory Group Mtg July 30 (Lee)

- First official meeting took place on Monday July 30 in Vancouver RHQ.
- New Minister and Deputy made opening remarks – strong commitment to this issue, opening to feedback from advisory group on how funding and efforts should be prioritized.
- Updates on recent measures e.g. MMR's, new proposed Critical habitat, ECHO vessel slowdown trial, Science update – all presentations on committee share folder.
- Given this is a multi-stakeholder forum there are significant variation in interests and knowledge on each of the key threats. It will be challenging to bring all members up to the same level of knowledge on each of the key threats as each sector has a particular view based on issues that are specific to their sector.
- Particular interest on prey availability issue, SEP, science hydrophone data, membership/representation, data from whale tagging in US,
- Participants will have until Aug. 18 to provide feedback on draft ToR and a proposed forward agenda format.
- Next advisory meeting will take place in October and theme may be prey availability.
- All documents for the advisory group are posted on the regional share drive: \\Dcbcvanna01b\VAN_RHQ_1\Region\FAM\SRKW OPS Committee

2. Roundtable (all)

- Communications: Having a central, one stop, and online location for all things SRKW is still needed to support information sharing with stakeholders.
- OPP -SRKW: Overall engagement strategy for region on SRKW is needed. Leverage senior decision making committees to get this going.
- National Whales Initiative: What are the details of activities / how funding will be used to support SRKW measures in Pacific region.
- Regional SRKW Strategy: (July 12) FM Program Delivery made a presentation to the Operations and Planning Committee on a 'Regional Coordination & Integration Plan'. This work will be led by Lee Harber (FM-program delivery) in close collaboration with Karen Leslie (EMB-SARA Regional Manager). It will include 3 part strategy:
    - 1) Governance, 2) Engagement and 3) Implementation Plan. Folder with this presentation and other related documents will be developed on regional share drive.

3. Action Items:

- Lee to create folder on regional share drive for SRKW operations committee documents.
- Discussion with communications on what a 'Regional Hub Webpage' would include and linkages to National Campaign Webpage.

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Dozie, Juachi

From: Girouard, Louise
Sent: August-08-18 1:42 PM
To: Lowe, Carmel; Davis, Neil
Cc: Thomson, Andrew; Malikian, Janine; Harber, Lee; Webb, Cheryl
Subject: RE: J50 Partners Comms Coordination Call @ 3:30pm

Just received clarification from NOAA that, for the purposes of today's call, the focus will be on communications. NOAA will no longer have their subject matter experts on the call - only representatives from their Public Affairs and Communications branch.

I will take the call and send a debrief afterwards.

Louise

> **From:** Lowe, Carmel
> **Sent:** Wednesday, August 8, 2018 1:30 PM
> **To:** Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
> **Cc:** Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
> **Subject:** RE: J50 Partners Comms Coordination Call @ 3:30pm
>
> Just looping Cheryl into these discussions give the SARA implications.....
>
> *Carmel*
>
> Carmel Lowe, Ph.D.
> Regional Director Science | Directrice régionale des sciences
> Fisheries and Oceans Canada | Pêches et Océans Canada
> Pacific Biological Station | Station biologique du Pacifique
> 3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
>
> Carmel.Lowe@dfo-mpo.gc.ca
> Telephone | Téléphone 250-756-7177
> Facsimile | Télécopieur 250-729-8360
> Government of Canada | Gouvernement du Canada
>
> > **From:** Davis, Neil
> > **Sent:** August 8, 2018 1:22 PM
> > **To:** Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
> > **Cc:** Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
> > **Subject:** RE: J50 Partners Comms Coordination Call @ 3:30pm
> >
> > Thanks Louise,

s.16(2)

s.19(1)

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There's no one from NOAA on that list. I assume that means Forbes Darby, the NOAA comms mgr, is the only NOAA participant? Seems a bit odd.

It would be quite helpful to have our own version of the content on pages 1-6 of this comms plan to organize ourselves, ID the individuals involved, and set out a schedule for mtgs and info flow. Is that something someone on your team might be able to work on w Lee?

Thx
Neil

From: Girouard, Louise
Sent: Wednesday, August 8, 2018 12:37 PM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: RE: J50 Partners Comms Coordination Call @ 3:30pm

Hi Neil,
Here is the list of invitees to this afternoon's call.

Response Partners Communications Contacts

Organization	Name	Title & Role	Contact Info
University of Washington	Deborah Giles	Researcher, fecal sample collection	[redacted] 916-531-1516
	Sam Wasser	PI, researcher, fecal	[redacted]
	Michelle Ma (James Urton)	Assistant News Director	206-543-2580 [redacted]
Vancouver Aquarium	Martin Haulena Jim McBain	Veterinary Medical Assessment	[redacted]
	Deana Lancaster	Communications Manager	office: 604 659 3752 cell: [redacted]
SR3	Holly Fearnbach	Photogrammetry	[redacted]
Department of Fisheries and Oceans	Lara Sloan	DFO Communications Advisor	Office: 250.363.3749 Mobile: [redacted] Lara.Sloan@dfo-mpo.gc.ca media.pac@dfo-mpo.gc.ca 604-240-3841
	Paul Cottrell	DFO Marine	

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s.19(1)

	John Ford Stephen Raverty	Mammal Coordinator Killer whale biologist Pathologist and expert on diseases in killer whales	250-667-4698 778-839-6916
Lummi Nation	Kurt Russo Back up POC: Tony Hillaire	Lummi Treaty Protection Task Force Lummi Indian Business Counsel, Chief of Staff	[redacted]
Governor Inslee office/WDFW	WDFW Enforcement	JT Austin Tara Lee	
King County Department of Natural Resources and Parks	Doug Williams	PIO	[redacted] office: 206-477-4543 cell: [redacted]
Sea World	Taylor Claytor		[redacted]
The Whale Sanctuary Project	Charles Vinick Jeff Foster Katy Foster	Executive Director	Whalesanctuaryproject.org [redacted]
Whale Museum's Soundwatch Program	Taylor Shedd		

From: Davis, Neil
Sent: Wednesday, August 8, 2018 12:23 PM
To: Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
Cc: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Lowe, Carmel

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s.19(1)

<Carmel.Lowe@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: RE: J50 Partners Comms Coordination Call @ 3:30pm

Hi Louise

I can attend and will ask Lee Harber to join. I don't expect that either of us will be able to provide technical input, but it looks like the focus of this call is more about coordination. Do we know who the senior program lead is for this on the US side? And do we know if program officials will be attending this call, or is it just comms folks?

From: Girouard, Louise
Sent: Wednesday, August 8, 2018 8:48 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>
Subject: FW: J50 Partners Comms Coordination Call @ 3:30pm

Good morning,

We know that the Vancouver Aquarium will be present on this call. Can you please advise if someone from program can also attend?

Thank you,

L

From: Forbes Darby - NOAA Federal
Sent: Wednesday, August 8, 2018 8:41 AM
To:
Kurt Russo
Amilee Wilson - NOAA Federal <
Ruth Howell - NOAA Federal <
>; Michael Milstein - NOAA Federal
Jim Milbury - NOAA Federal
Sarah Mesnick - NOAA Federal
>
Subject: J50 Partners Comms Coordination Call @ 3:30pm

Good morning,
Just a reminder, we will have a call today at **3:30 pm PDT** to discuss coordinating communications on the J50 emergency response.

This call is for partners directly involved in the response effort to discuss our individual communication efforts, ways to help each other, and stay coordinated.

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s.19(1)

Here is dial-in information for the call.
503-326-7666 (no passcode)

Also, I want to share NOAA Fisheries' working communications plan. A working draft is also attached for those who are unable to access google docs. The plan outlines the steps we're taking to provide regular public updates and stay in sync with the on-the-water response team.

Please let me know if I should be reaching out to others who should be included in this conversation. And let me know if I can answer any questions in the meantime.

Regards,
Forbes

--
Forbes Darby
Communication Program Manager
NOAA Fisheries Northwest Fisheries Science Center
2725 Montlake Blvd E
Seattle, WA 98112
Office: 206-302-2474
Cell: 3[redacted]

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Khanna, Sukriti

From: Burns, Adam
Sent: August-08-18 1:09 PM
To: Winfield, Nicholas; Davis, Neil; Thomson, Andrew; McElhone, Kathryn
Subject: Fw: Comms!

Fyi

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>
Sent: Wednesday, August 8, 2018 4:06 PM
To: Blewett, Catherine
Cc: Stringer, Kevin; Kahn, Zoe; Butcher, Ashley; Patrick, Lindsey; Reid, Rebecca; Burns, Adam
Subject: RE: Comms!

Hi – here is the latest:

Media lines are now in approvals in NHQ. The NOAA press conference this morning focused mostly on process and was handled well by Paul Cottrell and by Dr. Sheila Thornton. We would recommend that the two continue from this point on as spoke persons given that the focus is now more on the scientific options for treatment. We understand that the licensing has more to do with SARA than the MMRs. As for correction for the misinterpretation of Paul's remarks yesterday by CP, we will scan the other news sources to see if it has continued. We believe the story has evolved and our focus should now be on stating the options on saving the whale and reaffirming our position on the issues and explaining that it is complex, nor procedural.

Next steps: working to get some messaging approved for the next NOAA call tomorrow at 10 am PT.

There has been a lot of media coverage recently around the health of J50, a juvenile SRKW. Late last week, NOAA announced potential plans for emergency interventions to address her health. Here's a quick update on what we're doing to stay on top of this

- NOAA is holding daily press conferences updating on the status of J50 and their response actions, which DFO technical staff are attending. While we've established a dialogue with them at a working level to review their proposals, we're still working on identifying the appropriate contact at a more senior level to ensure we are working with them in a coordinated way.

- We're convening a small group from region and NHQ to talk daily about updates, review NOAA's proposals, and report up. MINO is seeking regular updates on this issue. There may be a briefing for MINO scheduled as early as tomorrow to outline NOAA's proposals and our assessment of them. NOAA is seeking a licence from DFO to be able to undertake some of the actions in Canadian waters, so we'll need to decide which proposed emergency measures we support or not and why. We'll need to convey this back to NOAA and have it reflected in our communications materials.

Hope this is helpful.

Sylvie

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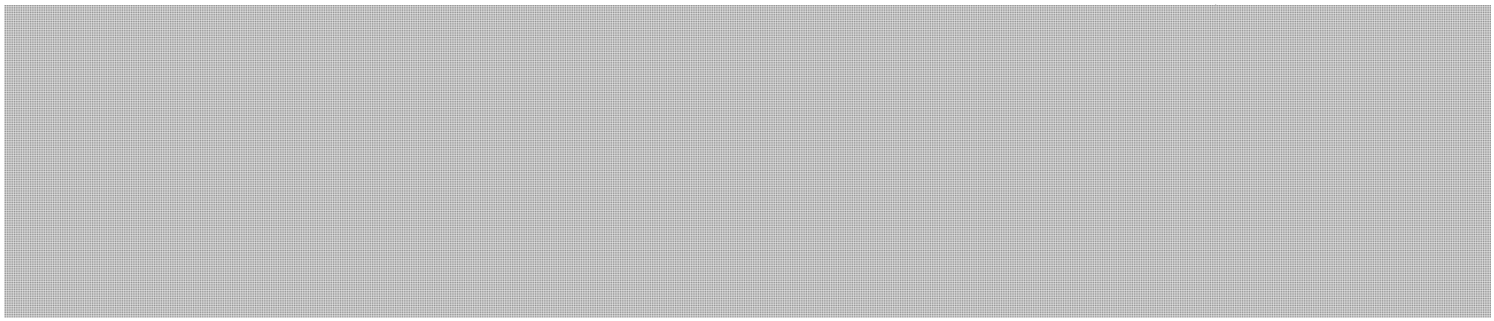
From: Blewett, Catherine
Sent: Wednesday, August 8, 2018 12:33 PM
To: Stringer, Kevin <Kevin.Stringer@dfo-mpo.gc.ca>; Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>; Kahn, Zoe <Zoe.Kahn@dfo-mpo.gc.ca>
Subject: Comms!
Importance: High

Hi there



Thanks
C

Sent from my BlackBerry 10 smartphone on the Bell network.

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s.16(2)

Khanna, Sukriti

From: Harber, Lee
Sent: August-08-18 1:25 PM
To: Davis, Neil
Subject: FW: For Action Please: FW: Parks Canada DFO meeting - Any Significant OPP Project Issues / Collaboration?
Attachments: Parks Canada DFO meeting

Hi Neil – FYI, mtg btw senior management teams of DFO and Parks Canada on Aug. 20. I imagine we may need to some prep for this – I will look closely at agenda in attached.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Smith, Ken
Sent: 2018–August-08 1:19 PM
To: Harber, Lee
Subject: FW: For Action Please: FW: Parks Canada DFO meeting - Any Significant OPP Project Issues / Collaboration?

Hi Lee - FYI....

Trevor lists listed SRKW under SARA in attached. I'm assuming Cheryl / Andy will cover but would appreciate you cc'ing me anything you may prep to help support this meeting

Regards

Ken

From: Smith, Ken
Sent: Wednesday, August 8, 2018 1:16 PM
To: Klaver, March <March.Klaver@dfo-mpo.gc.ca>; Amaya, Libardo <Libardo.Amaya@dfo-mpo.gc.ca>; Silverstein, Adam <Adam.Silverstein@dfo-mpo.gc.ca>; Cauffope, Genevieve <Genevieve.Cauffope@dfo-mpo.gc.ca>; Chiang, Eric <Eric.Chiang@dfo-mpo.gc.ca>; Chmelnitsky, Elly <Elly.Chmelnitsky@dfo-mpo.gc.ca>
Cc: Hayes, Trish <Trish.Hayes@dfo-mpo.gc.ca>; Payne, Brigid <Brigid.Payne@dfo-mpo.gc.ca>; Stadel, Angela <Angela.Stadel@dfo-mpo.gc.ca>
Subject: For Action Please: FW: Parks Canada DFO meeting - Any Significant OPP Project Issues / Collaboration?

Hi OPP Co-ordinators / Project Leads,

The RDG and other RMC members will be meeting with Trevor Swerdfager (now Senior VP, Parks Canada Operations) and other senior Parks Canada management on the afternoon of August 20th to discuss areas of collaboration, co-ordination, issues etc. (see attached for email exchange between Rebecca and Trevor). There is a pre-meeting discussion with RDG this Monday (August 13th).

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Apologies if your Director's have already asked for same but I would appreciate any quick input you may have on specific areas of DFO-Parks collaboration (planned or actual) on any OPP projects along with any potentially significant issues. Best available by noon Monday August 13th would be appreciated .

Thank you,

Ken Smith
Director, Oceans Protection Plan Secretariat
Fisheries and Oceans Canada – Pacific Region
(604) 666-0346

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Khanna, Sukriti

Subject:	Parks Canada DFO meeting
Location:	Exec boardroom 15th floor, 401 Burrard Street, Vancouver, BC
Start:	Mon 20/08/2018 1:00 PM
End:	Mon 20/08/2018 4:00 PM
Show Time As:	Tentative
Recurrence:	(none)
Meeting Status:	Not yet responded
Organizer:	Reid, Rebecca
Required Attendees:	Murdoch, Sarah; Lowe, Carmel; Antcliffe, Bonnie (Bonnie.Antcliffe@dfo-mpo.gc.ca); Smith, Ken; Davis, Neil; Webb, Allison; Payne, Brigid; Thomson, Andrew; Webb, Cheryl; Brown, Laura (Pacific); Masson, Colin; Louise.Blais@pc.gc.ca; trevor.swerdfager@pc.gc.ca
Optional Attendees:	Spencer, Kent

Update July 19: meeting with Parks Canada confirmed for Aug 20.

Louise – please forward to Parks Canada Participants. Thank you. On the day of the meeting, please have your folks check see the 2nd floor Commissionaire for visitor check in.

***

July 17, 2018
All – please see below email communication between RDG and Trevor Swerdfager.

Please hold this time in your calendar for Aug 20. You will also receive an invitation to hold Aug 24. Parks Canada will notify by the end of this week which date works best for them.

We understand that you may already have holiday plans for the third week of August and understand that not all will be available. Alternates can be sent in your absence.

From: Reid, Rebecca
Sent: July-17-18 10:19 PM
To: trevor.swerdfager@pc.gc.ca
Cc: melanie.chin@pc.gc.ca; dave.mcdonough@pc.gc.ca; helen.davies@pc.gc.ca; ernie.gladstone@pc.gc.ca; Johal, Sharan; Okahori, Karen
Subject: Re: proposed meeting

Hi Trevor - thanks for the suggestion and nice to hear from you. We have been making it a practice to meet with other federal management teams - so far - INAC, TC, RCMP, DoJ, ECCC (not as easy to organize as you might think), CFIA, PSPC - but not Parks!

Your agenda sounds good, and we can work to that timeframe.

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I will ask Karen to follow up with Louise, and see if we can find some time. Our other meetings have lasted a couple of hours, but we're not as specific as what you are suggesting, so presumably we should add on a bit more time?

In addition to your list, I would add:

Sarah Murdoch
Carmel Lowe
Bonnie Antcliffe
Ken Smith
Neil Davis
Allison Webb
Brigid Payne

However given summer plans, not everyone is likely to be available.

RR

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: trevor.swerdfager@pc.gc.ca
Sent: Monday, July 16, 2018 5:43 AM
To: Reid, Rebecca
Cc: melanie.chin@pc.gc.ca; dave.mcdonough@pc.gc.ca; helen.davies@pc.gc.ca; ernie.gladstone@pc.gc.ca
Subject: proposed meeting

Hi Rebecca

I hope this finds you well and that the summer is giving you some respite. Though knowing how things go on your coast in the summer, I rather doubt it :)

I am writing today to propose that we convene a senior management meeting with you and appropriate members of your team with myself and the Parks Canada leadership team responsible for our three Pacific coastal parks. I have now had time to visit each of those parks and it seems to me that there are a great many links and opportunities for collaboration with DFO and, indeed, a few challenges as well, that I think it would be profitable to explore together with a view to tightening our collaboration on achieving of objectives in areas of shared interest. If you are amenable, I would like to suggest that we aim for a meeting in the third week of August in Vancouver. We could ask our respective offices, (Louise Blais at my end) to line up specific dates if this idea is attractive to you. My hope would be that you would be able to spend as much of the meeting with us as possible but know you have a lot of pressures on your time and may wish to leave us to bang away at. My thinking is that it might involve yourself, Andy, Cheryl, Laura, Colin and possible others. For our part it would include me, Helen Davies, Ernie Gladstone and Karen Haugen and Dave McDonagh. Possible agenda items could include:

- Overview of our respective programs (affords an opportunity to provide context about the respective field units)
    - PCA, CBCFU, GH priorities
    - DFO regional priorities
- Fisheries/Marine Management (perhaps this is collapsed in to the overview)
    - Respective roles/resp. in the marine park context (e.g. PCA/PacRim/DFO MoU)
        - DFO Pacific Region Integrated Fisheries Management Plan (ref. to NMCAR, but not waters managed under CNPA)
    - Gwaii Haanas - AMB role
- Working with partners:

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  - PCA: Hakai Institute (opportunity to profile work)
- Parks Canada Management Planning
  - Implementation of the GH Land to Sea MP
  - Development of the PacRim NPR & GINPR MP
- Indigenous Partners
  - Examples of working with partners (i.e. Haikai Inst. & eel grass monitoring; DFO and green crab monitoring)
  - Harvesting in the pa
  - rk marine environments
- Species at Risk
  - Southern Resident Killer Whale
- Emergency Response
  - Marine Litter
  - Tsunami
  -

I look forward to hearing from you on this idea and hope we can pull it off despite summer schedules.

Cheers!

Trevor Swerdfager
Vice-président principal, Opérations
Parcs Canada
Senior Vice-President, Operations
Parks Canada
819-420-9623

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s.21(1)(a)
s.21(1)(b)
s.69(1)(g) re: (f)

Wilkinson, Davida

From: May-McNally, Shannan
Sent: August-09-18 7:59 AM
To: Brekke, Heather
Cc: McMillan, Christie; Jones, Lisa Ann; Burr, Linda
Subject: [redacted] SRKW and NRKW CHO
Attachments: [redacted]

Importance: High

Hi Heather,

I have attached the [redacted] for the SRKW and the NRKW CHOs. [redacted] has been reviewed by Christie McMillan, Parks Canada, and LRA (Christy Wilson). There are a few comments [redacted] that require your input – these are flagged. Additionally, [redacted] will still need to be finalized with the comments from the external review. [redacted]

If possible, can you please respond to the flagged comments and complete the [redacted] by August 16th or sooner? Parks Canada will still need to send [redacted] to their field units for review in order to meet the timelines for completing the Order – the sooner we can send this out to them the better. Apologies for the tight turnaround given all that you have on your plate at the moment.

Please let me know if you have any questions/concerns.

Thank you,

Shannan

Shannan May-McNally
Species at Risk Program / Programmes des espèces en péril
Fisheries and Oceans Canada / Pêches et Océans Canada
200 Kent Street / 200 rue Kent, Ottawa (ON) K1A 0E6
Shannan.May-McNally@dfo-mpo.gc.ca
Telephone / Téléphone 613-297-7044 *Note new number

Pages 1944 to / à 1960

are withheld pursuant to section

sont retenues en vertu de l'article

69(1)(g) re: (f)

of the Access to Information Act

de la Loi sur l'accès à l'information

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s.21(1)(a)

s.21(1)(b)

Dozie, Juachi

From: Brekke, Heather
Sent: August-09-18 3:41 PM
To: Castro, Arcelia
Cc: Shaikh, Sharlene; Jones, Lisa Ann
Subject: Rush translation - RKW amended Recovery Strategy
Attachments: Edits_RKW aRS_Aug9_for Lexitech.docx; 2018 Proposed Amended RS for Resident Killer Whales-FR.docx

Importance: High

Hi Arcelia,

Can you please process the following rush translation (we need a 24 hour turn around or better) of the amended Recovery Strategy for Resident Killer Whale? They are very minor changes. I have attached a one-pager that highlights the changes required to the document to help expedite this, as well as the full French Translation of the document (note we do not have the tracked changes within this document).

We need this back as soon as possible [redacted]

Much appreciated,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

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21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

Pages 1967 to / à 2070

are duplicates of

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pages 2461 to / à 2564

s.21(1)(a)
s.21(1)(b)
s.23

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Dozie, Juachi

From: Brekke, Heather
Sent: August-09-18 12:04 PM
To: Shaikh, Sharlene
Subject:
Attachments:

From: Brekke, Heather
Sent: August-09-18 11:47 AM
To: Stewart, Julie; Busby, Corina
Cc: Davis, Neil
Subject: FW:

Hi Julie and Corina,

Best,
Heather

From: Legault, Josée [mailto:Josee.Legault@justice.gc.ca]
Sent: August-09-18 11:11 AM
To: Stewart, Julie
Cc: Brekke, Heather; Davis, Neil; Busby, Corina; Makkay, Kristina; Beaton, Heather (DOJ)
Subject: RE:

Julie,

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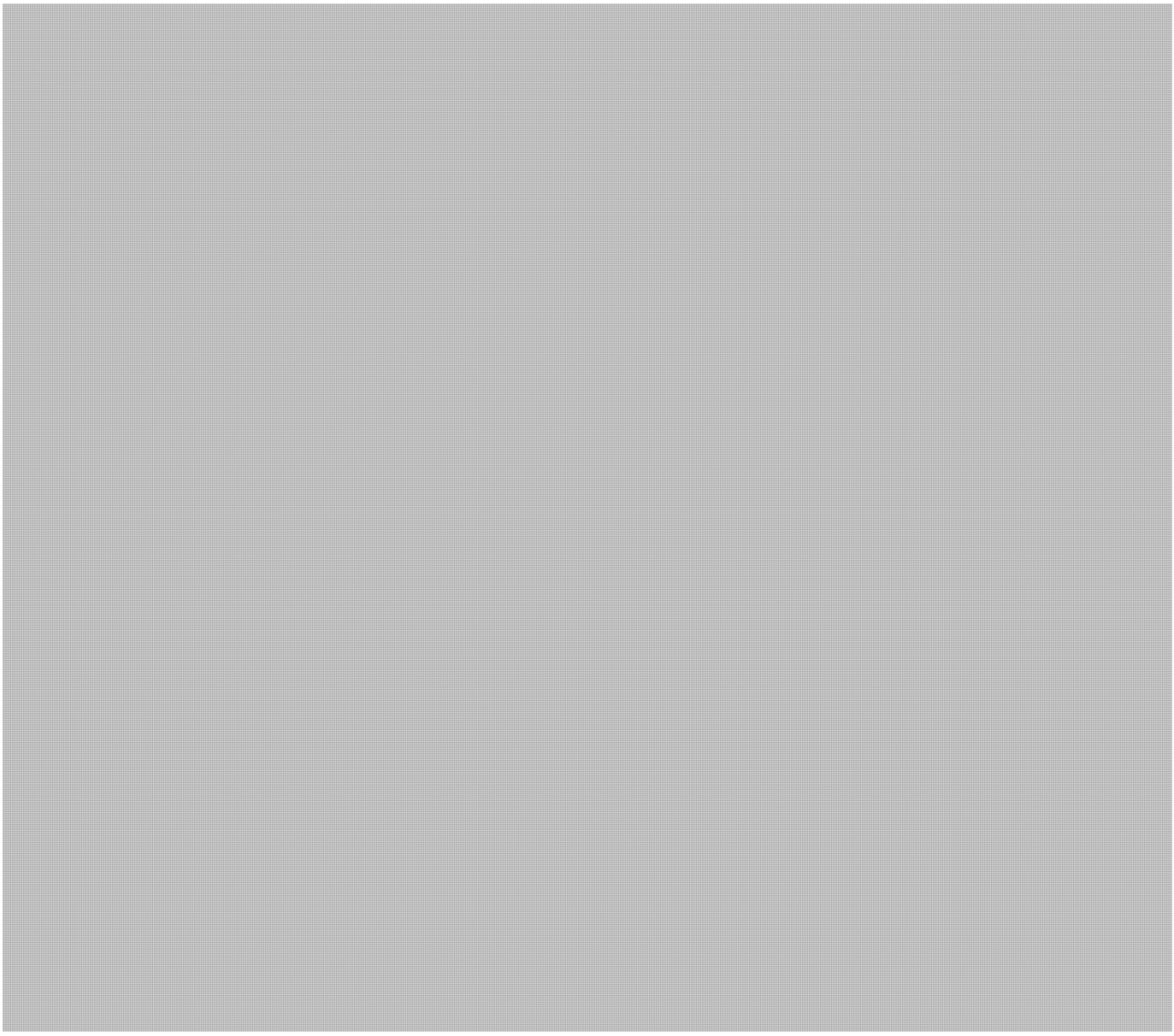

Josée

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SECRET PROFESSIONNEL DES AVOCATS

Josée Legault
Avocate générale / General Counsel
Ministère de la Justice du Canada / Department of Justice Canada
Services juridiques / Legal Services
Pêches et Océans Canada - Fisheries and Oceans Canada
200 Kent, Ottawa K1A 0E6
Tél. / tel.: (613) 990-2291
Téléc. / fax: (613) 990-9385
Josée.Legault@justice.gc.ca

From: Stewart, Julie [mailto:Julie.Stewart@dfo-mpo.gc.ca]
Sent: Wednesday, August 08, 2018 6:04 PM

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To: Legault, Josée <Josee.Legault@justice.gc.ca>
Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; Makkay, Kristina <Kristina.Makkay@dfo-mpo.gc.ca>
Subject: FW:
Importance: High

Josee:

Julie Stewart
Director / Directrice
Species at Risk Program / Programme des Espèces en Péril
200 rue Kent St.
Station 10W061
Ottawa, ON
K1A 0E6

(613) 949-7524 (t)
(613) (c)

Julie.stewart@dfo-mpo.gc.ca

From: Busby, Corina
Sent: Wednesday, August 8, 2018 4:47 PM
To: Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>
Subject:

Pages 2074 to / à 2075

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 23, 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

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Khanna, Sukriti

From: Thomson, Andrew
Sent: August-09-18 1:31 PM
To: Teri Rowles - NOAA Federal; Cottrell, Paul
Cc: Lynne Barre - NOAA Federal; Deborah Fauquier - NOAA Affiliate; Brad Hanson; Sarah Wilkin; Candice Emmons; Kristin Wilkinson; Davis, Neil; Greene, Annely; Thornton, Sheila
Subject: Authorization
Attachments: NOAA_SECTION_38_AUTHORIZATION_AUG_9.doc

Dr. Rowles

Please find attached an

AUTHORIZATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL, PURSUANT TO SECTION 38 OF THE MARINE MAMMAL REGULATIONS, SECTION 52 OF THE FISHERY (GENERAL) REGULATIONS, AND SECTION 74 OF THE SPECIES AT RISK ACT.

I would ask that you carefully read the authorization and ensure you understand the conditions and respond via email to that effect.

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

From: Teri Rowles - NOAA Federal [mailto:
Sent: Thursday, August 9, 2018 1:10 PM
To: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Cc: Lynne Barre - NOAA Federal Deborah Fauquier - NOAA Affiliate < Brad Hanson < Sarah Wilkin ; Candice Emmons < ; Kristin Wilkinson < Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Greene, Annely <Annely.Greene@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>
Subject: Re: SARA license application

Great.

On Aug 9, 2018, at 3:07 PM, Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca> wrote:

> Thanks so much Lynne! Really appreciate everyone efforts to get us the information. There should be an email to Teri for her signature in the next hour or so.
> Best,
> Paul

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Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Lynne Barre - NOAA Federal [redacted]
Sent: Thursday, August 09, 2018 12:40 PM
To: Cottrell, Paul; Thornton, Sheila; Greene, Annely
Cc: Teri Rowles - NOAA Federal; Deborah Fauquier - NOAA Affiliate; Brad Hanson; Sarah Wilkin; Candice Emmons; Kristin Wilkinson
Subject: SARA license application

Hi Paul,
Attached is the completed SARA license application form along with the application document submitted yesterday. I've also attached documentation of Animal Care Committee compliance for the activities approved under the US NMFS Permit No. 18786-03.

I believe that Brad Hanson has already applied for foreign vessel clearance, but am awaiting confirmation. I can send along a photo of the vessel as soon as I get one from the team.

Please let us know if you need anything else and please provide confirmation that work can proceed in Canadian waters or a copy of the license or as soon as it is available.
Thanks,
Lynne

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039, KILLER WHALE

AUTHORIZATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL

PURSUANT TO SECTION 38 OF THE *MARINE MAMMAL REGULATIONS*, SECTION 52 OF THE *FISHERY (GENERAL) REGULATIONS*, AND SECTION 74 OF THE *SPECIES AT RISK ACT*, THIS AUTHORIZATION IS HEREBY GIVEN TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL. THE AUTHORIZATION IS VALID ANYWHERE IN CANADIAN FISHERIES WATERS IN THE PACIFIC OCEAN WHERE FISHERIES AND OCEANS CANADA (DFO) ADMINISTERS THE AQUATIC RESOURCES AND OCEAN SPACE.

THE AUTHORIZATION IS VALID ONLY IN ACCORDANCE WITH THE FOLLOWING CONDITIONS SPECIFIED PURSUANT TO SUBSECTION 38(2) OF THE *MARINE MAMMAL REGULATIONS*:

1. THE OPERATIONS AUTHORIZED UNDER THIS AUTHORIZATION WILL INCLUDE THE FOLLOWING:

I) INTERACTING WITH A MARINE MAMMAL INCLUDING KILLER WHALES FOR THE PURPOSES OF;

1. RESPIRATORY SAMPLES WILL BE COLLECTED VIA PETRI DISHES MOUNTED ON THE END OF A CARBON FIBER POLE HELD JUST OVER THE BLOWHOLE. THE VESSEL CLOSELY APPROACHES THE WHALE TO WITHIN THE REACH OF THE POLE (5 METERS OR LESS), PERPENDICULAR TO THE WHALE, AND THE POLE IS LOWERED OVER THE BLOWHOLE TO CATCH THE EXPIRED AIR. RESPIRATORY SAMPLES TAKEN WILL BE ANALYZED FOR POTENTIAL PATHOGENS AND OTHER HEALTH INDICATORS USING CYTOLOGY, CULTURE AND MOLECULAR METHODS.

2. FECAL SAMPLES WILL BE COLLECTED OPPORTUNISTICALLY WHENEVER POSSIBLE WHEN VISUALLY DETECTED FLOATING ON THE WATER. FECAL SAMPLES COLLECTED THIS WAY CAN YIELD ANAYLSES OF NUTRITION, HORMONES (E.G., STRESS, REPRODUCTIVE), TOXINS, AND DNA (TO IDENTIFY SUBJECT WHALE AND PREY SPECIES). SMALL FECAL SAMPLES WILL BE COLLECTED ON STERILE GAUZE SEALED IN ZIP LOCKS AND PLACED IMMEDIATELY IN COOL STORAGE. LARGER FECAL SAMPLES WILL BE COLLECTED IN TUBES AND IMMEDIATELY PLACED IN A COOLER.
   NOTE: WHILE ALL EFFORTS WILL BE MADE TO COLLECT FECES FROM J-50, IDENTIFICATION OF WHICH ANIMAL DEFECATED IS NOT ALWAYS IMMEDIATELY POSSIBLE IN THE FIELD, AND ANY AVAILABLE SAMPLE WILL BE COLLECTED.

3. MUCUS SAMPLES WILL BE COLLECTED OPPORTUNISTICALLY WHENEVER POSSIBLE WHEN VISUALLY DETECTED FLOATING ON THE WATER. MUCUS SAMPLES CAN YIELD ANALYSES OF HORMONES AND PATHOGENS, AMONG OTHERS. MUCUS SAMPLES WILL BE COLLECTED ON STERILE GAUZE AND PLACED IN COLD STORAGE.
   NOTE: WHILE ALL EFFORTS WILL BE MADE TO COLLECT MUCUS FROM J-50, IDENTIFICATION OF WHICH ANIMAL THE MUCUS IS FROM MAY NOT ALWAYS BE IMMEDIATELY POSSIBLE IN THE FIELD, AND ANY AVAILABLE SAMPLE WILL BE COLLECTED.

4. IF SKIN DISCOLORATIONS OR ABNORMALITIES ARE OBSERVED (AS HAS BEEN PREVIOUSLY NOTED CAUDAL TO THE BLOWHOLE AND ON THE FLUKES), SKIN SAMPLES WILL BE OBTAINED THROUGH A ROUGHENED COLLECTOR (DISH SCRUBBIE OR SIMILAR) ON THE END OF A 5 M POLE. THE VESSEL CLOSELY APPROACHES THE WHALE TO WITHIN THE REACH OF THE POLE (5 METERS OR LESS), PERPENDICULAR TO THE WHALE, AND THE POLE IS LOWERED INTO CONTACT WITH

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THE DISCOLORED SKIN. SKIN SCRAPE SAMPLES WILL BE ANALYZED TO IDENTIFY POTENTIAL PATHOGENS.

5. VETERINARY HEALTH ASSESSMENT IS CONDUCTED VISUALLY BY A VETERINARIAN, WITH PHOTO AND VIDEO DOCUMENTATION. THIS ASSESSMENT WILL LIKELY BE CONDUCTED SIMULTANEOUSLY WITH THE CLOSE APPROACHES TO COLLECT THE SAMPLES LISTED ABOVE, AND WOULD LIKELY NOT REQUIRE ADDITIONAL APPROACHES. HEALTH ASSESSMENT WILL INCLUDE OBSERVATIONS OF BODY CONDITION AND BEHAVIOR, FROM VARIOUS MARINE VESSELS, DRONE OBSERVATIONS, AND FROM SHORE (WHEN POSSIBLE). PHOTOS (HIGH RESOLUTION) AND VIDEO (1080P AND GREATER RESOLUTION) WILL BE COLLECTED FROM ALL PLATFORMS UTILIZED, AND IMAGES WILL BE USED FOR COMPARISONS AND ONGOING ASSESSMENT. BEHAVIORAL PATTERNS WILL BE MONITORED AS OFTEN AS POSSIBLE THROUGHOUT THE RESPONSE. BEHAVIORAL ETHOGRAMS MAY BE DEVELOPED FOR THIS PURPOSE WITH A DEDICATED OBSERVER COLLECTING THIS DATA FOR FUTURE ANALYSIS. PARAMETERS THAT WILL BE MONITORED AND RECORDED INCLUDE:
   - RESPIRATORY RATE (# RESPIRATIONS/5 MINUTES)
   - BLOW ODOR
   - DEFECATION FREQUENCY
   - POSITION AND DISTANCE RELATIVE TO J16 (OR OTHER CLOSELY ASSOCIATED POD MEMBERS)
   - FORAGING ACTIVITY; % TIME SPENT LOGGING

6. INITIAL MEDICAL TREATMENT VIA DELIVERY OF ANTIBIOTICS BY INJECTION, EITHER VIA POLE SYRINGE OR REMOTE DELIVERY DART SYSTEM. INJECTIONS WILL BE ADMINISTERED INTO THE EPAXIAL OR OTHER LARGE MUSCLE MASS. NEEDLE LENGTH WILL BE APPROXIMATELY 2". ALL INJECTIONS WILL BE SUPERVISED BY A VETERINARIAN.
   MEDICATIONS LIST IN ORDER OF PRIORITY (AS ADVISED BY VETERINARY TEAM). THE ANTIBIOTICS ON THIS LIST ARE INTENDED TO ADDRESS THE RANGE OF BACTERIAL INFECTIONS J50 IS SUSCEPTIBLE TO.

   - 2000-3000MG CONVENIA, SQ OR IM ONCE (600KG X 5 MG/KG) – ONE DOSE WOULD PROVIDE 7-14 DAYS EFFICACY; OR
   - 2000-3000 MG EXCEDE SQ OR IM ONCE (600KG X 5 MG/KG) - ONE DOSE WOULD PROVIDE 5-10 DAYS EFFICACY

   *ANTIBIOTIC DRUG CHOICE MAY CHANGE BASED ON DIAGNOSTIC FINDINGS. ANY NEW DRUG CHOICES & DOSAGES WILL BE PROVIDED TO DFO AS NEEDED PRIOR TO USE.

II) APPROACHING A KILLER WHALE WITH A VEHICLE WITHIN A DISTANCE OF LESS THAN 200 METRE DISTANCE;

III) DOCUMENTATION AND PHOTOGRAPHY OF MARINE MAMMALS;

IV) THE COLLECTION OF ANY BIOLOGICAL SAMPLES REQUESTED FROM FISHERIES AND OCEANS CANADA.

1. COLLECTION OF BREATH/BLOW SAMPLE

2. COLLECTION OF FECAL SAMPLE

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3. COLLECTION OF OTHER SAMPLES OPPORTUNISTICALLY AVAILABLE (E.G., MUCUS AND SKIN)

4. IF SKIN DISCOLORATION IS NOTED, COLLECTION OF SKIN SCRAPINGS FROM DISCOLORED AREA

5. COMPLETION OF A VISUAL VETERINARY HEALTH ASSESSMENT AND PHOTO/VIDEO DOCUMENTATION

6. PROVIDING ANTIBIOTIC TREATMENT FROM THE NWFSC BOAT VIA POLE SYRINGE OR REMOTE DELIVERY.

ALL SAMPLES WILL BE COLLECTED BY A RESPONSE TEAM ON A SINGLE BOAT (A NOAA VESSEL). THE COMPOSITION OF THE TEAM WILL VARY DEPENDING UPON THE DAY, BUT A COMPLETE LIST OF POTENTIAL PERSONNEL IS LISTED.

2. THE AUTHORIZED PERSONNEL FOR THE ABOVE OPERATIONS SHALL BE AS FOLLOWS:

LEAD DR. TERRI ROWLES,
THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

RESPONSE TEAM MEMBERS

DR. JOE GAYDOS (SEADOC) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. JIM MCBAIN (SEA WORLD) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. HENDRIK NOLLENS (SEA WORLD) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. MARTIN HAULENA (VANCOUVER AQUARIUM) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. BRAD HANSON (NOAA) SAMPLE COLLECTION AND VESSEL DRIVER

CANDICE EMMONS (NOAA) SAMPLE COLLECTION AND VESSEL DRIVER

JEFF FOSTER (WHALE SANCTUARY PROJECT) SAMPLE COLLECTION AND VESSEL DRIVER

KATY FOSTER (WHALE SANCTUARY PROJECT) SAMPLE COLLECTION AND VESSEL DRIVER

TREVOR FOSTER (RESEARCH TECH) SAMPLE COLLECTION AND VESSEL DRIVER

*A STAFF MEMBER WILL BE IDENTIFIED FOR PHOTO AND/OR VIDEO DOCUMENTATION.

ACTIVITIES CARRIED OUT UNDER THE AUTHORITY OF THIS AUTHORIZATION SHALL ONLY BE CONDUCTED UNDER THE DIRECT SUPERVISION OF THE AUTHORIZATION HOLDER OR AUTHORIZED INDIVIDUALS AS LISTED ABOVE. THE AUTHORIZATION HOLDER IS RESPONSIBLE TO ENSURE THAT AN AUTHORIZED INDIVIDUAL IS PRESENT DURING ANY ACTIVITY AUTHORIZED UNDER THIS AUTHORIZATION.

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3. THE RESPONSE ACTIVITY SHALL TAKE PLACE IN THE WATERS OF THE PACIFIC REGION THAT ARE PARTS OF AREAS UNDER THE ADMINISTRATION OF DFO;

4. THE FOLLOWING DFO REGIONAL STAFF SHALL BE ADVISED IMMEDIATELY ON COMMENCEMENT OF ANY OPERATIONS: PACIFIC REGION: PAUL COTTRELL (604) 240-3841

5. AN INCIDENT REPORT SHALL BE MADE DETAILING SPECIES IDENTIFICATION, EFFORTS MADE TO SAVE THE ANIMAL, CONDITION OF THE ANIMAL AT THE COMMENCMENT AND AT THE END OF THE OPERATON, LOCATION (COORDINATES) OF THE OPERATION, NAMES OF ALL INVOLVED IN THE OPERATION, ANY OTHER OBSERVATIONS RELEVANT TO INCIDENT;

6. A QUARTERLEY REPORT INCLUDING LOCATIONS, SPECIES, NUMBERS AND OBSERVATIONS SHALL BE PROVIDED TO DFO PACIFIC REGION REGIONAL COORDINATOR:
PAUL COTTRELL, PAUL.COTTRELL@DFO-MPO.GC.CA

7. THAT A COPY OF THIS AUTHORIZATION SHALL BE CARRIED BY ALL PERSONNEL ENGAGED IN THE RESPONSE OPERATIONS. GOVERNMENT ISSUED IDENTIFICATION DOCUMENTS ARE REQUIRED FOR ANYONE ACTING UNDER THE AUTHORITY OF THIS AUTHORIZATION. THE AUTHORIZATION AND ANY PERSON WORKING UNDER ITS AUTHORITY MUST BE AVAILABLE FOR INSPECTION UPON REQUEST BY A FISHERY OFFICER OR FISHERY GUARDIAN;

8. THE AUTHORIZATION HOLDER MUST HAVE APPROPRIATE, CURRENT LIABILITY INSURANCE AND/OR APPROPRIATE, CURRENT WORKERS COMPENSATION COVERAGE IN PLACE THAT COVERS ACTIVITIES UNDERTAKEN IN ALL PROVINCES COVERED BY THIS AUTHORIZATION THROUGHOUT THE DURATION OF THE CONTRACT. COPIES OF THIS DOCUMENTATION MUST BE PROVIDED TO THE DFO IN ADVANCE OF COMMENCEMENT OF THE AUTHORIZED ACTIVITIES.

9. THE AUTHORIZATION HOLDER AGREES THAT IT IS FULLY LIABLE FOR ANY DAMAGES THAT IT CAUSES TO ANY THIRD PARTY IN CONNECTION WITH ACTIVITIES AUTHORIZED BY THE AUTHORIZATION, REGARDLESS OF WHETHER THE THIRD PARTY MAKES ITS CLAIM AGAINST CANADA OR THE AUTHORIZATION HOLDER. IF CANADA IS REQUIRED, AS A RESULT OF JOINT AND SEVERAL LIABILITY, TO PAY A THIRD PARTY IN RESPECT OF DAMAGES CAUSED BY THE AUTHORIZATION HOLDER, THE AUTHORIZATION HOLDER MUST REIMBURSE CANADA FOR THAT AMOUNT.

10. IF ACTIVITIES AUTHORIZED BY THIS AUTHORIZATION ARE CONDUCTED WHILE ON A DFO VESSEL, THE AUTHORIZATION HOLDER WILL ENSURE THAT PERSONS ENGAGED IN THIS ACTIVITY WEAR APPROPRIATE SAFETY EQUIPMENT DURING THE ENTIRE LENGTH OF THE ACTIVITY. SAFETY EQUIPMENT INCLUDES, BUT MAY NOT BE LIMITED TO, PERSONAL PROTECTION EQUIPMENT THAT MEETS CANADIAN SAFETY STANDARDS.

11. THIS AUTHORIZATION AND CONDITIONS CANCEL AND REPLACE ANY PREVIOUS AUTHORIZATION AND CONDITION ISSUED TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION FOR THE PURPOSE OF CONDUCTING RESPONSE OPERATIONS;

13. THIS AUTHORIZATION IS VALID FROM DATE OF ISSUANCE TO OCTOBER 31, 2018;

14. THE ISSUANCE OF THIS AUTHORIZATION IMPLIES NO COMMITMENT BY THE MINISTER OR THE DEPARTMENT TO REISSUE THE AUTHORIZATION.

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 6:56 AM
To: Davis, Neil; Thomson, Andrew
Cc: Harber, Lee

Hi Guys,
Wanted to update you on the licencing of NOAA/partners to conduct research in Canada on SRKW (J50). We received a project proposal from NOAA last night. I have sent NOAA our marine mammal SARA research application form which they will need to fill in so we can draft the licence (this form is part of the SARA licence Science/RM review/approval process). I have sent the NOAA proposal to you guys and science. Hoping we can work through this with science fast to get their approval. The recent thinking by science (have to verify with science at 9) is to licence the assessment components (breath and fecal sampling) along with the antibiotic pole or darting methods to deliver a broad spectrum antibiotic in Canadian wateers. An expert panel of veterinarians on both sides of the boarder have recommended and approved this approach. [redacted] Let me know if you want to have a call at 8:30 or earlier to discuss before the 9 am meeting.
Cheers,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

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Khanna, Sukriti

From: Thomson, Andrew
Sent: August-09-18 1:00 PM
To: Cottrell, Paul; Davis, Neil
Subject: RE: NOAA Licence
Attachments: NOAA_SECTION_38_AUTHORIZATION_AUG_9AJLT.doc

So it would look like this?

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

From: Cottrell, Paul
Sent: Thursday, August 9, 2018 12:54 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: NOAA Licence

Hi Guys,
Attached is an authorization letter for review/approval and the memo for your signature Andy. Interesting that there is no signature portion for the proponent to sign agreeing to the terms of the authorization letter. I suggest we add this in (I will look up Dr teri Rowles email and address for the Authorization letter and send your way). I had some fights with the formatting and wondering if your EA might be able to check and put all the text in capitals which I think it has to be in. If they are able to do that, it would be awesome. J-pod off Sooke heading to in-land waters, looks like we are getting this done just in the nick of time! let me know if you need anything else from me, other wise I will get on the water to assist where I can.
Best,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

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039, KILLER WHALE

AUTHORIZATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL

PURSUANT TO SECTION 38 OF THE *MARINE MAMMAL REGULATIONS*, SECTION 52 OF THE *FISHERY (GENERAL) REGULATIONS*, AND SECTION 74 OF THE *SPECIES AT RISK ACT*, THIS AUTHORIZATION IS HEREBY GIVEN TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL. THE AUTHORIZATION IS VALID ANYWHERE IN CANADIAN FISHERIES WATERS IN THE PACIFIC OCEAN WHERE FISHERIES AND OCEANS CANADA (DFO) ADMINISTERS THE AQUATIC RESOURCES AND OCEAN SPACE.

THE AUTHORIZATION IS VALID ONLY IN ACCORDANCE WITH THE FOLLOWING CONDITIONS SPECIFIED PURSUANT TO SUBSECTION 38(2) OF THE *MARINE MAMMAL REGULATIONS*:

1.THE OPERATIONS AUTHORIZED UNDER THIS AUTHORIZATION WILL INCLUDE THE FOLLOWING:

I) INTERACTING WITH A MARINE MAMMAL INCLUDING KILLER WHALES FOR THE PURPOSES OF;

1. RESPIRATORY SAMPLES WILL BE COLLECTED VIA PETRI DISHES MOUNTED ON THE END OF A CARBON FIBER POLE HELD JUST OVER THE BLOWHOLE. THE VESSEL CLOSELY APPROACHES THE WHALE TO WITHIN THE REACH OF THE POLE (5 METERS OR LESS), PERPENDICULAR TO THE WHALE, AND THE POLE IS LOWERED OVER THE BLOWHOLE TO CATCH THE EXPIRED AIR. RESPIRATORY SAMPLES TAKEN WILL BE ANALYZED FOR POTENTIAL PATHOGENS AND OTHER HEALTH INDICATORS USING CYTOLOGY, CULTURE AND MOLECULAR METHODS.

2. FECAL SAMPLES WILL BE COLLECTED OPPORTUNISTICALLY WHENEVER POSSIBLE WHEN VISUALLY DETECTED FLOATING ON THE WATER. FECAL SAMPLES COLLECTED THIS WAY CAN YIELD ANAYLSES OF NUTRITION, HORMONES (E.G., STRESS, REPRODUCTIVE), TOXINS, AND DNA (TO IDENTIFY SUBJECT WHALE AND PREY SPECIES). SMALL FECAL SAMPLES WILL BE COLLECTED ON STERILE GAUZE SEALED IN ZIP LOCKS AND PLACED IMMEDIATELY IN COOL STORAGE. LARGER FECAL SAMPLES WILL BE COLLECTED IN TUBES AND IMMEDIATELY PLACED IN A COOLER.
   NOTE: WHILE ALL EFFORTS WILL BE MADE TO COLLECT FECES FROM J-50, IDENTIFICATION OF WHICH ANIMAL DEFECATED IS NOT ALWAYS IMMEDIATELY POSSIBLE IN THE FIELD, AND ANY AVAILABLE SAMPLE WILL BE COLLECTED.

3. MUCUS SAMPLES WILL BE COLLECTED OPPORTUNISTICALLY WHENEVER POSSIBLE WHEN VISUALLY DETECTED FLOATING ON THE WATER. MUCUS SAMPLES CAN YIELD ANALYSES OF HORMONES AND PATHOGENS, AMONG OTHERS. MUCUS SAMPLES WILL BE COLLECTED ON STERILE GAUZE AND PLACED IN COLD STORAGE.
   NOTE: WHILE ALL EFFORTS WILL BE MADE TO COLLECT MUCUS FROM J-50, IDENTIFICATION OF WHICH ANIMAL THE MUCUS IS FROM MAY NOT ALWAYS BE IMMEDIATELY POSSIBLE IN THE FIELD, AND ANY AVAILABLE SAMPLE WILL BE COLLECTED.

4. IF SKIN DISCOLORATIONS OR ABNORMALITIES ARE OBSERVED (AS HAS BEEN PREVIOUSLY NOTED CAUDAL TO THE BLOWHOLE AND ON THE FLUKES), SKIN SAMPLES WILL BE OBTAINED THROUGH A ROUGHENED COLLECTOR (DISH SCRUBBIE OR SIMILAR) ON THE END OF A 5 M POLE. THE VESSEL CLOSELY APPROACHES THE WHALE TO WITHIN THE REACH OF THE POLE (5 METERS OR LESS), PERPENDICULAR TO THE WHALE, AND THE POLE IS LOWERED INTO CONTACT WITH

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THE DISCOLORED SKIN. SKIN SCRAPE SAMPLES WILL BE ANALYZED TO IDENTIFY POTENTIAL PATHOGENS.

5. VETERINARY HEALTH ASSESSMENT IS CONDUCTED VISUALLY BY A VETERINARIAN, WITH PHOTO AND VIDEO DOCUMENTATION. THIS ASSESSMENT WILL LIKELY BE CONDUCTED SIMULTANEOUSLY WITH THE CLOSE APPROACHES TO COLLECT THE SAMPLES LISTED ABOVE, AND WOULD LIKELY NOT REQUIRE ADDITIONAL APPROACHES. HEALTH ASSESSMENT WILL INCLUDE OBSERVATIONS OF BODY CONDITION AND BEHAVIOR, FROM VARIOUS MARINE VESSELS, DRONE OBSERVATIONS, AND FROM SHORE (WHEN POSSIBLE). PHOTOS (HIGH RESOLUTION) AND VIDEO (1080P AND GREATER RESOLUTION) WILL BE COLLECTED FROM ALL PLATFORMS UTILIZED, AND IMAGES WILL BE USED FOR COMPARISONS AND ONGOING ASSESSMENT. BEHAVIORAL PATTERNS WILL BE MONITORED AS OFTEN AS POSSIBLE THROUGHOUT THE RESPONSE. BEHAVIORAL ETHOGRAMS MAY BE DEVELOPED FOR THIS PURPOSE WITH A DEDICATED OBSERVER COLLECTING THIS DATA FOR FUTURE ANALYSIS. PARAMETERS THAT WILL BE MONITORED AND RECORDED INCLUDE:
   - RESPIRATORY RATE (# RESPIRATIONS/5 MINUTES)
   - BLOW ODOR
   - DEFECATION FREQUENCY
   - POSITION AND DISTANCE RELATIVE TO J16 (OR OTHER CLOSELY ASSOCIATED POD MEMBERS)
   - FORAGING ACTIVITY; % TIME SPENT LOGGING

6. INITIAL MEDICAL TREATMENT VIA DELIVERY OF ANTIBIOTICS BY INJECTION, EITHER VIA POLE SYRINGE OR REMOTE DELIVERY DART SYSTEM. INJECTIONS WILL BE ADMINISTERED INTO THE EPAXIAL OR OTHER LARGE MUSCLE MASS. NEEDLE LENGTH WILL BE APPROXIMATELY 2". ALL INJECTIONS WILL BE SUPERVISED BY A VETERINARIAN.
   MEDICATIONS LIST IN ORDER OF PRIORITY (AS ADVISED BY VETERINARY TEAM). THE ANTIBIOTICS ON THIS LIST ARE INTENDED TO ADDRESS THE RANGE OF BACTERIAL INFECTIONS J50 IS SUSCEPTIBLE TO.

   - 2000-3000MG CONVENIA, SQ OR IM ONCE (600KG X 5 MG/KG) - ONE DOSE WOULD PROVIDE 7-14 DAYS EFFICACY; OR
   - 2000-3000 MG EXCEDE SQ OR IM ONCE (600KG X 5 MG/KG) - ONE DOSE WOULD PROVIDE 5-10 DAYS EFFICACY

   *ANTIBIOTIC DRUG CHOICE MAY CHANGE BASED ON DIAGNOSTIC FINDINGS. ANY NEW DRUG CHOICES & DOSAGES WILL BE PROVIDED TO DFO AS NEEDED PRIOR TO USE.

II) APPROACHING A KILLER WHALE WITH A VEHICLE WITHIN A DISTANCE OF LESS THAN 200 METRE DISTANCE;

III) DOCUMENTATION AND PHOTOGRAPHY OF MARINE MAMMALS;

IV) THE COLLECTION OF ANY BIOLOGICAL SAMPLES REQUESTED FROM FISHERIES AND OCEANS CANADA.

1. COLLECTION OF BREATH/BLOW SAMPLE

2. COLLECTION OF FECAL SAMPLE

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3. COLLECTION OF OTHER SAMPLES OPPORTUNISTICALLY AVAILABLE (E.G., MUCUS AND SKIN)

4. IF SKIN DISCOLORATION IS NOTED, COLLECTION OF SKIN SCRAPINGS FROM DISCOLORED AREA

5. COMPLETION OF A VISUAL VETERINARY HEALTH ASSESSMENT AND PHOTO/VIDEO DOCUMENTATION

6. PROVIDING ANTIBIOTIC TREATMENT FROM THE NWFSC BOAT VIA POLE SYRINGE OR REMOTE DELIVERY.

ALL SAMPLES WILL BE COLLECTED BY A RESPONSE TEAM ON A SINGLE BOAT (A NOAA VESSEL). THE COMPOSITION OF THE TEAM WILL VARY DEPENDING UPON THE DAY, BUT A COMPLETE LIST OF POTENTIAL PERSONNEL IS LISTED.

2. THE AUTHORIZED PERSONNEL FOR THE ABOVE OPERATIONS SHALL BE AS FOLLOWS:

LEAD DR. TERRI ROWLES, THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

RESPONSE TEAM MEMBERS

DR. JOE GAYDOS (SEADOC) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. JIM MCBAIN (SEA WORLD) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. HENDRIK NOLLENS (SEA WORLD) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. MARTIN HAULENA (VANCOUVER AQUARIUM) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. BRAD HANSON (NOAA) SAMPLE COLLECTION AND VESSEL DRIVER

CANDICE EMMONS (NOAA) SAMPLE COLLECTION AND VESSEL DRIVER

JEFF FOSTER (WHALE SANCTUARY PROJECT) SAMPLE COLLECTION AND VESSEL DRIVER

KATY FOSTER (WHALE SANCTUARY PROJECT) SAMPLE COLLECTION AND VESSEL DRIVER

TREVOR FOSTER (RESEARCH TECH) SAMPLE COLLECTION AND VESSEL DRIVER

*A STAFF MEMBER WILL BE IDENTIFIED FOR PHOTO AND/OR VIDEO DOCUMENTATION.

ACTIVITIES CARRIED OUT UNDER THE AUTHORITY OF THIS AUTHORIZATION SHALL ONLY BE CONDUCTED UNDER THE DIRECT SUPERVISION OF THE AUTHORIZATION HOLDER OR AUTHORIZED INDIVIDUALS AS LISTED ABOVE. THE AUTHORIZATION HOLDER IS

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RESPONSIBLE TO ENSURE THAT AN AUTHORIZED INDIVIDUAL IS PRESENT DURING ANY ACTIVITY AUTHORIZED UNDER THIS AUTHORIZATION.

3. THE RESPONSE ACTIVITY SHALL TAKE PLACE IN THE WATERS OF THE PACIFIC REGION THAT ARE PARTS OF AREAS UNDER THE ADMINISTRATION OF DFO;

4. THE FOLLOWING DFO REGIONAL STAFF SHALL BE ADVISED IMMEDIATELY ON COMMENCEMENT OF ANY OPERATIONS:
PACIFIC REGION: PAUL COTTRELL (604) 240-3841

5. AN INCIDENT REPORT SHALL BE MADE DETAILING SPECIES IDENTIFICATION, EFFORTS MADE TO SAVE THE ANIMAL, CONDITION OF THE ANIMAL AT THE COMMENCMENT AND AT THE END OF THE OPERATON, LOCATION (COORDINATES) OF THE OPERATION, NAMES OF ALL INVOLVED IN THE OPERATION, ANY OTHER OBSERVATIONS RELEVANT TO INCIDENT;

6. A QUARTERLEY REPORT INCLUDING LOCATIONS, SPECIES, NUMBERS AND OBSERVATIONS SHALL BE PROVIDED TO DFO PACIFIC REGION REGIONAL COORDINATOR:
PAUL COTTRELL, PAUL.COTTRELL@DFO-MPO.GC.CA

7. THAT A COPY OF THIS AUTHORIZATION SHALL BE CARRIED BY ALL PERSONNEL ENGAGED IN THE RESPONSE OPERATIONS. GOVERNMENT ISSUED IDENTIFICATION DOCUMENTS ARE REQUIRED FOR ANYONE ACTING UNDER THE AUTHORITY OF THIS AUTHORIZATION. THE AUTHORIZATION AND ANY PERSON WORKING UNDER ITS AUTHORITY MUST BE AVAILABLE FOR INSPECTION UPON REQUEST BY A FISHERY OFFICER OR FISHERY GUARDIAN;

8. THE AUTHORIZATION HOLDER MUST HAVE APPROPRIATE, CURRENT LIABILITY INSURANCE AND/OR APPROPRIATE, CURRENT WORKERS COMPENSATION COVERAGE IN PLACE THAT COVERS ACTIVITIES UNDERTAKEN IN ALL PROVINCES COVERED BY THIS AUTHORIZATION THROUGHOUT THE DURATION OF THE CONTRACT. COPIES OF THIS DOCUMENTATION MUST BE PROVIDED TO THE DFO IN ADVANCE OF COMMENCEMENT OF THE AUTHORIZED ACTIVITIES.

9. THE AUTHORIZATION HOLDER AGREES THAT IT IS FULLY LIABLE FOR ANY DAMAGES THAT IT CAUSES TO ANY THIRD PARTY IN CONNECTION WITH ACTIVITIES AUTHORIZED BY THE AUTHORIZATION, REGARDLESS OF WHETHER THE THIRD PARTY MAKES ITS CLAIM AGAINST CANADA OR THE AUTHORIZATION HOLDER. IF CANADA IS REQUIRED, AS A RESULT OF JOINT AND SEVERAL LIABILITY, TO PAY A THIRD PARTY IN RESPECT OF DAMAGES CAUSED BY THE AUTHORIZATION HOLDER, THE AUTHORIZATION HOLDER MUST REIMBURSE CANADA FOR THAT AMOUNT.

10. IF ACTIVITIES AUTHORIZED BY THIS AUTHORIZATION ARE CONDUCTED WHILE ON A DFO VESSEL, THE AUTHORIZATION HOLDER WILL ENSURE THAT PERSONS ENGAGED IN THIS ACTIVITY WEAR APPROPRIATE SAFETY EQUIPMENT DURING THE ENTIRE LENGTH OF THE ACTIVITY. SAFETY EQUIPMENT INCLUDES, BUT MAY NOT BE LIMITED TO, PERSONAL PROTECTION EQUIPMENT THAT MEETS CANADIAN SAFETY STANDARDS.

11. THIS AUTHORIZATION AND CONDITIONS CANCEL AND REPLACE ANY PREVIOUS AUTHORIZATION AND CONDITION ISSUED TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION FOR THE PURPOSE OF CONDUCTING RESPONSE OPERATIONS;

13. THIS AUTHORIZATION IS VALID FROM DATE OF ISSUANCE TO OCTOBER 31, 2018;

14. THE ISSUANCE OF THIS AUTHORIZATION IMPLIES NO COMMITMENT BY THE MINISTER OR THE DEPARTMENT TO REISSUE THE AUTHORIZATION.

s.16(2) s.21(1)(a) s.21(1)(b)

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Khanna, Sukriti

From: Bate, Dan
Sent: August-09-18 1:55 PM
To: Sloan, Lara; Malikian, Janine
Cc: Thornton, Sheila; Thomson, Andrew; Cottrell, Paul
Subject: RE: [redacted] media inquiries on J50/35.

Hi Lara – [redacted]

Dan

From: Sloan, Lara
Sent: August-09-18 11:54 AM
To: Bate, Dan; Malikian, Janine
Cc: Thornton, Sheila; Thomson, Andrew; Cottrell, Paul
Subject: [redacted] media inquiries on J50/35.
Importance: High

[redacted]

Thoughts?

Lara Sloan | Communications Advisor | Conseillère en communications | Fisheries and Oceans Canada | Pêches et Océans Canada | Tel: 250.363.3749 | Cel: [redacted] Lara.Sloan@dfo-mpo.gc.ca
www.pac.dfo-mpo.gc.ca

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Suivez-nous sur Twitter! http://twitter.com/MPO_Pacifique

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Khanna, Sukriti

From: Davis, Neil
Sent: August-09-18 7:42 AM
To: Girouard, Louise; Thomson, Andrew
Cc: Cottrell, Paul; Thornton, Sheila; Lowe, Carmel; Malikian, Janine; Bate, Dan; Sloan, Lara; Kaba, Kyle; Johal, Sharan
Subject: Re: URGENT: J50 Messaging and questions

Let's discuss at on our call at 9. I think it will be important for us to be prepared to clarify what activities we are approving and whether there are any activities we are not approving and if so, why not. Ideally, we should also be able to clarify when the permit will be issued.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Girouard, Louise
Sent: Thursday, August 9, 2018 6:09 AM
To: Thomson, Andrew; Davis, Neil
Cc: Cottrell, Paul; Thornton, Sheila; Lowe, Carmel; Malikian, Janine; Bate, Dan; Sloan, Lara; Kaba, Kyle; Johal, Sharan
Subject: URGENT: J50 Messaging and questions

Good morning,
I am asked by NHQ to provide some clarity around the following anticipated issues to be raised on the NOAA media call...

Andy\Neil,

Will we be able to confirm that DFO has received all the necessary applications and permits WILL BE issued for the eventuality of an intervention in Canadian waters?

Also we will get questions regarding the sighting yesterday of J35 and her calf . Who will be able to speak to this and explain what are we planning to do to help her??

As for J50 and the proposed operation by NOAA. They will have their lead expert on the call this morning to explain in detail how they would proceed and what would be the conditions that will allow them to do so. Eg location and access to J50 etc. WHO from DFO would be able to speak to our involvment in such an operation?

Please call if you have any questions,

L

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Khanna, Sukriti

From: Lynne Barre - NOAA Federal [redacted]
Sent: August-09-18 12:41 PM
To: Cottrell, Paul; Thornton, Sheila; Greene, Annely
Cc: Teri Rowles - NOAA Federal; Deborah Fauquier - NOAA Affiliate; Brad Hanson; Sarah Wilkin; Candice Emmons; Kristin Wilkinson
Subject: SARA license application
Attachments: MM- SARA LICENCE APPLICATION_MMHSRP.docx; ROWLES_NMFS IACUC Form-_AFSC_NWFSC_Revised13Dec2016_wAppendices.pdf; Signed Letter of Assurance NW-AK 2015-2.pdf; MMHSRP application Study Techniques.docx

Hi Paul,
Attached is the completed SARA license application form along with the application document submitted yesterday. I've also attached documentation of Animal Care Committee compliance for the activities approved under the US NMFS Permit No. 18786-03.

I believe that Brad Hanson has already applied for foreign vessel clearance, but am awaiting confirmation. I can send along a photo of the vessel as soon as I get one from the team.

Please let us know if you need anything else and please provide confirmation that work can proceed in Canadian waters or a copy of the license or as soon as it is available.
Thanks,
Lynne

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Marine Mammal/SARA Licence Application Instructions

The Species at Risk Act (SARA) was proclaimed in June 2003, by the Government of Canada for the protection of species at risk. A licence is required under the authority of the Fisheries (General) Regulations, Marine Mammal Regulations and the Species at Risk Act. This application is to be completed for all research/projects affecting a marine mammal species which is listed as Extirpated, Endangered or Threatened under Canada's Species at Risk Act. Information about the Act, status and location of SARA-listed species can be obtained at the following website: http://www.sararegistry.gc.ca/default_e.cfm. Use this application if your research covers a variety of species that are both listed and non-listed under SARA.

For marine mammal species, including those listed as Special Concern under SARA, a Marine Mammal Licence Application is required and can be obtained from the Program Officer listed at the end of this document.

It is recommended that licence applications be submitted prior to **March 31st** each year and may be submitted pending dates and funding information is tentative. Applications received after **March 31st** will take additional time to process (i.e. up to 8 weeks) due to DFO operational limitations during the summer research period.

You need to apply for a Marine Mammal/SARA Licence when:

Contemplating an activity affecting a marine mammal that is listed as 'Extirpated', 'Endangered' or 'Threatened' on Schedule 1 of the SARA. Species listed as Special Concern are under the authority of the Fisheries (General) Regulations and the Marine Mammal Regulations and therefore require a Marine Mammal Licence.

What kind of activities may be authorized under SARA?

To be successful in your licence application, your activity must fall into one of the following categories under section 73(2) of SARA. The agreement may be entered into, or the licence issued, only if the Minister is of the opinion that:

a) The activity is scientific research relating to the conservation of the species and conducted by qualified persons;
b) The activity benefits the species or is required to enhance its chance of survival in the wild; or
c) Affecting the species is incidental to the carrying out of the activity.

Part I – Applicant Information:

An Animal Care Permit or equivalent is required for research activities with the potential to disturb marine mammals, particularly if permission to capture or conduct invasive sampling is requested. If you believe that you require an ACC authorization and are not affiliated with an academic institution, please contact the DFO Program Officer listed at the end of this document.

Part II – Study/Project Information

Please provide information regarding the logistics of the proposed research and be as accurate as possible. If a study proposal or work plan has been developed, please attach it to your application. Numbers below pertain to the corresponding licence application numbers.

1. Provide Project Title and an abstract (in 100 words or less) that summarizes the proposed research activity.
2. Identify the lead investigator as well as research assistants. Indicate if assistants will be working independently of lead investigator.
3. Indicate all marine mammal species that the research/project will target or potentially impact. Status and location of SARA-listed species can be obtained at the following website: http://www.sararegistry.gc.ca/default_e.cfm
4. Indicate the date and locations where the activity will occur. A listing of DFO Statistical Areas is available at the following website: http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/areas-secteurs/index-eng.html. A "blanket" licence for the entire BC coast will not be issued without a detailed project plan and sufficient justification. Multi-year permits will be issued for a maximum of 3 years for ongoing established research programs.
5. Attach a picture of the research vessel(s), aircraft or aerial drone that will be used and submit with your application. It is the responsibility of the applicant to obtain Foreign Vessel Clearance (FVC) www.state.gov/e/oes/ocns/opa/rvc when a non-Canadian vessel, aircraft or aerial drone, will be used for research purposes in Canadian waters. If you are trailering a US vessel for use in Canadian waters, a Customs Clearance number must be obtained at the Canadian border.

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6. 6(g): When marine mammals or marine mammal parts are to be transferred within British Columbia a Marine Mammal Transfer Licence is required. To transport across provincial or territorial boundaries, a Marine Mammal Transport Licence must be obtained. Please refer to the following website for information on which species require a Convention for the International Trade in Endangered Species (CITES) permit: http://www.cites.org/ to transport across an international boundary.
7. The "Be Whale Wise Guidelines - Marine Wildlife Guidelines for Boaters, Paddlers and Viewers (Revised 2011)" have been established to protect marine mammals from disturbance or harassment. Copies of the guidelines can be obtained online or from the Program Officer.
8. Self Explanatory
9. A detailed description of the project is necessary to assess potential impacts on the species of concern and other non targeted species. Please be specific as to the number, duration and distance of approach, restraints or sampling periods. If available, a work plan or proposal is useful in providing an assessment of the project. Attach field collection methods and techniques.

Part III – Impact and Mitigation Assessment

10. It is important to list all SARA-listed species and non-SARA listed species that may occur in the proposed research area and the anticipated harassments and/or mortalities for each.
11. Describe in detail anticipated or potential disturbances or mortalities to all species listed in Section 10 and include impacts on habitat(s) used by the species. List each species, the nature of harm, and rank the likelihood of harm or encounters (High, Medium, Low).
12. For information on Section 73(3) pre-conditions of SARA refer to: http://www.sararegistry.gc.ca/default_e.cfm. Pre-conditions (a) and (b) require that alternative measures such as area and/or time changes or changes to sampling gear or techniques must be considered and implemented if feasible before a licence can be issued. For pre-condition (c), please indicate (to the best of your knowledge) whether the proposed research activity, given (a) and (b), will jeopardize survival or recovery of the species. For the Minister of Fisheries and Oceans to be of the opinion that all of the pre-conditions laid out in Section 73(3) have been met, the onus is on the project proponent to do the following:
    - Be proactive in their research design,
    - Demonstrate awareness of the provisions of SARA, and
    - Demonstrate that measures are being taken to minimise harm to listed species, and that they have considered all alternatives to carrying out the activity.

Part IV – SARA Recovery Planning Evaluation

13. Copies of final Recovery Strategies, Action Plans and Management Plans are available on the SARA website: http://www.sararegistry.gc.ca/default_e.cfm. If recovery planning for the species under consideration has not been initiated, please indicate to the best of your ability how your proposed research/project supports species recovery.

Are other licences still required?

A Marine Mammal/SARA licence does not constitute an authorization to access property or supersede, cover or replace the need for other applicable authorizations which are the responsibility of the applicant., i.e. Foreign Vessel Clearance, National Wildlife Area research permits, Convention for the International Trade in Endangered Species (CITES) permits, Migratory Bird permits, additional Fisheries Act licences or Provincial permits under the BC Wildlife Act.

Submitting Your Application:

Please contact the undersigned if you have any questions and send your completed application via fax or email to:

Annely Greene
DFO Marine Mammal Program Officer
Fisheries & Oceans Canada – Pacific Region
401 Burrard Street, Vancouver, BC V6C 3S4

Phone: 604-666-0071 Email: Annely.Greene@dfo-mpo.gc.ca

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Marine Mammal/SARA Licence Application

Fisheries & Oceans Canada – Pacific Region

Please use **TAB key to move between fields for check boxes**

PART I - APPLICANT INFORMATION

Date:	August 9, 2018			
Name:	Teresa Rowles			
Organization:	NOAA/National Marine Fisheries Service – Office of Protected Resources			
Street:	1315 East-West Highway			
City:	Silver Spring			
Province/State:	Maryland			
Country:	USA	Postal Code/Zip:	20910	
Phone:	+1 301-427-8448	Cellular:	[redacted]	Fax: 301-713-4060
Email:	[redacted]			

Applicant Experience/Credentials: List relevant research programs, publications and/or attach CV. **Coordinator the U.S. Marine Mammal Health and Stranding Response Program. To learn more about the program, please visit:** https://www.fisheries.noaa.gov/national/marine-life-distress/marine-mammal-health-and-stranding-response-program

Do you or your organization hold an Animal Care Committee Permit for this work? Yes ☒ No ☐

Attach copy to application - **Permit #NW/AK 2015-2** If no, explain why *(Refer to Part I – Applicant Information).*

List previous issued Marine Mammal/SARA licence numbers:

PART II - STUDY/PROJECT INFORMATION

1. **Project Title:** **Conduct Marine Mammal Emergency Response Activities in Canadian Waters**

Project Abstract:

2. **Personnel:**

J50, a 4 year old endangered Southern resident killer whale, has presented in declining health. In order to better understand the health status of J50, a veterinary health assessment and sample collection is needed. This assessment may be conducted in U.S. waters (all activities are currently permitted), but the response would be significantly improved if the assessment team could conduct activities in Canadian waters as the whales move across the border. All assessment activities in Canada will be conducted in consultation with DFO.

Lead Investigator: **Teri Rowles**

Assistants:

Dr. Joe Gaydos (SeaDoc) Health assessment including diagnostics and medical treatment
Dr. Jim McBain (Sea World) Health assessment including diagnostics and medical treatment
Dr. Hendrik Nollens (Sea World) Health assessment including diagnostics and medical treatment
Dr. Martin Haulena (Vancouver Aquarium) Health assessment including diagnostics and medical treatment
Dr. Brad Hanson (NOAA) Sample collection and vessel driver
Candice Emmons (NOAA) Sample collection and vessel driver
Jeff Foster (Whale Sanctuary Project) Sample collection and vessel driver
Katy Foster (Whale Sanctuary Project) Sample collection and vessel driver

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Trevor Foster (research tech) **Sample collection and vessel driver**

3. Species Information:

Species Studied: **Southern Resident killer whales (*Orcinus orca*)**

4. Dates & Location:

Study Period: From: **August 9, 2018** To: **TBD (until an emergency response is no longer needed)**

Are you requesting a multi-year licence? If yes, state reason for request below. Yes ☐ No ☒

(Refer to Part II, Item 3 of the Instructions)

Study Area/Location: **All areas where Southern Resident killer whales may occur (primarily areas 18, 19, and 20)**

(For DFO Statistical areas refer to Part II, Item 4 of the instructions)

5. Vessel/Aircraft/Aerial Drone Information: Attach photograph of research vessel(s) with your application.

Name(s): NOAA Hurricane 733

Registration #: MOC-1

Country of Registration: USA

If vessel, aircraft or aerial drone is registered outside of Canada, have you applied for Foreign Vessel Clearance? *(If no, please refer to Part II, Item 5 of the Instructions)* Yes ☒ No ☐

Comment:

METHODOLOGY:

6. Will animals be subjected to invasive sampling? Invasive sampling includes any methodology that involves capture and restraint of animals, direct or remote sampling of blood or tissues and the attachment of any apparatus to the marine mammal. Yes ☒ No ☐

a) If yes, how many samples will be taken? Breath and blow samples will be taken remotely. Skin scrapings may be taken if discoloration is noted.

a) Will live animals be collected? Yes ☐ No ☒

b) If yes, how many animals will be collected?

c) Will live animals be transported from one marine environment to another marine environment or holding facility? Yes ☐ No ☒

d) If yes, state location and rationale:

e) If yes to d) will animals be returned into the marine environment in the future? Yes ☐ No ☐

f) If yes, state location and rationale:

g) Will animals, specimens or samples be transported? Yes ☒ No ☐

i) Within British Columbia? Yes ☒ No ☐

ii) To another Province or Territory in Canada Yes ☐ No ☒

iii) Across an international boundary? *(Refer to Part II, Item 5 CITES in the Instructions)* Yes ☒ No ☐

7. Do you propose to be in contravention of regionally posted guidelines (Be Whale Wise Guidelines – for Boaters, Paddlers and Viewers) for any planned activity? If yes Yes ☒ No ☐

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	explain rationale. (*Refer to Part II, Item 7 of the Instructions)* **We will need to close approach J50 (and may incidentally approach other individuals in her pod) to obtain samples for health screening. See attached for specific activities.**
8.	Objective of Research/Project:
	For the initial veterinary health assessment, and sample collection, the following activities are proposed (in priority order): 1. Collection of breath/blow sample 2. Collection of fecal sample 3. Collection of other samples opportunistically available (e.g., mucus and skin). 4. If skin discoloration is noted, collection of skin scrapings from discolored area. 5. Completion of a visual veterinary health assessment and photo/video documentation. 6. Providing antibiotic treatment from the NWFSC boat via pole syringe or remote delivery.
9.	Explain field collections/study techniques. Attach project work plan/proposal if available. **See attached plan.**

PART III – IMPACT ASSESSMENT

10.	SARA Species to be included in Permit:	Anticipated # of mortalities for each species:
	Southern Resident killer whale (*Orcinus orca*)	**0**
	Non-SARA Species to be included in Permit:	Anticipated # of mortalities for each species:
	None	**0**

11. Describe anticipated or potential disturbances to the identified species, other species and/or the habitat:

The team will close approach the target animal of concern (J50) to obtain samples to determine the health status of the whale. Other members of her pod may also be incidentally harassed by close approach. The likelihood of harm from close approach is low. Impacts on other species are not anticipated. Samples to be collected include:

1. **Breath/blow samples will be collected using petri dishes attached to a carbon fiber pole. The likelihood of harm from breath/blow collection is low.**
2. **Opportunistic collection of fecal samples. No additional risk beyond close approach.**
3. **Opportunistic collection of other samples (mucous, sloughed skin, etc.). No additional risk beyond close approach.**
4. **If skin discoloration is noted, skin scrapings may be taken. The contact between the sampling pole and the skin poses a low risk, as minor skin abrasions may occur.**
5. **Initial medical treatment via delivery of antibiotics by injection. The injection of antibiotics poses a medium risk; there is a small potential abscess, localized pain, and inflammation. More serious side effects such as muscle necrosis are possible but unlikely. The antibiotics to be used (Excede and Convenia) are both third generation and adverse side effects are not serious and occur at a low frequency.**

12. Based on the pre-conditions in Section 73(3) of SARA, the proponent should specify:
(addressing a through c is mandatory for SARA species – see instructions)

a) What alternatives to the proposed method of conducting the activity have you considered? How is the chosen method the best solution to reduce impact to the species?

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This whale (J50) is a known individual and is part of the Southern Resident killer whale population. Her significant decline in body condition in the past 8+ months is concerning, and she her documented decline in weight and body condition is similar to another Southern Resident killer whale that died in 2017. These activities are necessary to begin to understand the health status of this whale, and broad-spectrum antibiotics may be needed to help J50 overcome any illnesses that may be causing her decline.

b) What mitigation measures have been included, and how do they minimize the potential impacts on listed species and/or habitats? What mitigation measures have been considered and not included, and for what reasons were they rejected?

Mitigation measures include using highly skilled and experienced personnel for these activities. All of the proposed activities have been successfully used in the past and pose low risk. Additionally, the administration of antibiotics will be overseen by a licensed veterinarian. Impacts on other species or habitats are not anticipated.

c) Will the activities you plan to undertake jeopardize survival or recovery of the species, in light of measures in 12(a) and 12(b) above? If not, why not?

These activities will be conducted to diagnose and help an individual in an endangered population that has had a precipitous decline in body condition. Therefore, these measures will not jeopardize the recovery of the species, and may in fact enhance the population.

PART IV – SARA RECOVERY PLANNING EVALUATION

13. Has the proposed project/study been recommended in a SARA Recovery Strategy, Action Plan or Management plan? Please identify section.

Yes. These activities will contribute to Broad Strategy 4 in the Action Plan for the Northern and southern Resident Killer Whale (*Orcinus orca*) in Canada. Specifically, the proposed work may contribute to the investigation and monitoring of priority pathogens of concern (Table 2, line 60). Additionally, NOAA is defined as a potential partner for this specific work.

14. Will the proposed project/study assist in the recovery of the species identified? Please explain.

The proposed project will assist in the recovery of this endangered species. If no intervention is taken, it is likely that this individual will die. As J50 is a young female, a successful intervention would help the population as J50 would be able to contribute to the population growth. Additionally, understanding the health status of this individual, and what may be causing her decline, will be valuable, should a similar situation occur in other Southern Resident killer whales.

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Application to conduct marine mammal emergency response activities in Canadian Waters

J50, a 4 year old endangered Southern resident killer whale, has presented in declining health. Additional background information on J50 is available upon request.

In order to better understand the health status of J50, a veterinary health assessment and sample collection is needed. This assessment may be conducted in U.S. waters (all activities are currently permitted), but the response would be significantly improved if the assessment team could conduct activities in Canadian waters as the whales move across the border. All assessment activities in Canada will be conducted in consultation with DFO.

For the initial veterinary health assessment, and sample collection, the following activities are proposed (in priority order):

1. Collection of breath/blow sample
2. Collection of fecal sample
3. Collection of other samples opportunistically available (e.g., mucus and skin).
4. If skin discoloration is noted, collection of skin scrapings from discolored area.
5. Completion of a visual veterinary health assessment and photo/video documentation.
6. Providing antibiotic treatment from the NWFSC boat via pole syringe or remote delivery.

All samples will be collected by a response team on a single boat (a NOAA vessel). The composition of the team will vary depending upon the day, but a complete list of potential personnel is below.

Additional information for each activity

1. Respiratory samples will be collected via petri dishes mounted on the end of a carbon fiber pole held just over the blowhole. The vessel closely approaches the whale to within the reach of the pole (5 meters or less), perpendicular to the whale, and the pole is lowered over the blowhole to catch the expired air. Respiratory samples taken will be analyzed for potential pathogens and other health indicators using cytology, culture and molecular methods.
   RISKS:
   - Close approach could result in possible vessel strike. Mitigation measure: Experienced personnel with a vessel equipped for close approach and this type of work.
   - Use of poles in close proximity to the whale could result in physical contact with sampling equipment. Mitigation measure: Experienced personnel with extensive experience and used successfully in the past.
   - Close approach and respiratory sample collection could result in possible disturbance to other pod members. This disturbance is expected to be temporary and minimal. Mitigation measure: Experienced observers, pre and post approach monitoring.
   - We will make note of any disturbance or behavioral changes or reactions.

2. Fecal samples will be collected opportunistically whenever possible when visually detected floating on the water. Fecal samples collected this way can yield anaylses of nutrition, hormones (e.g.,

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stress, reproductive), toxins, and DNA (to identify subject whale and prey species). Small fecal samples will be collected on sterile gauze sealed in zip locks and placed immediately in cool storage. Larger fecal samples will be collected in tubes and immediately placed in a cooler. Note: while all efforts will be made to collect feces from J-50, identification of which animal defecated is not always immediately possible in the field, and any available sample will be collected.

RISKS:

- Close approach provides the same risks outlined above. No additional risks are anticipated.

3. Mucus samples will be collected opportunistically whenever possible when visually detected floating on the water. Mucus samples can yield analyses of hormones and pathogens, among others. Mucus samples will be collected on sterile gauze and placed in cold storage. Note: while all efforts will be made to collect mucus from J-50, identification of which animal the mucus is from may not always be immediately possible in the field, and any available sample will be collected.

   RISKS:

   - Close approach provides the same risks outlined above. No additional risks are anticipated.

4. If skin discolorations or abnormalities are observed (as has been previously noted caudal to the blowhole and on the flukes), skin samples will be obtained through a roughened collector (dish scrubbie or similar) on the end of a 5 m pole. The vessel closely approaches the whale to within the reach of the pole (5 meters or less), perpendicular to the whale, and the pole is lowered into contact with the discolored skin. Skin scrape samples will be analyzed to identify potential pathogens.

   RISKS:

   - Close approach provides the same risks outlined above. No additional risks are anticipated.
   - Contact between the sampling pole and the whale will result in minor skin abrasions, which could cause swelling. Impacts are expected to be short-lived and minor. Mitigation measure: Experienced personnel and equipment has been used successfully in the past.

5. Veterinary health assessment is conducted visually by a veterinarian, with photo and video documentation. This assessment will likely be conducted simultaneously with the close approaches to collect the samples listed above, and would likely not require additional approaches. Health assessment will include observations of body condition and behavior, from various marine vessels, drone observations, and from shore (when possible). Photos (high resolution) and video (1080p and greater resolution) will be collected from all platforms utilized, and images will be used for comparisons and ongoing assessment. Behavioral patterns will be monitored as often as possible throughout the response. Behavioral ethograms may be developed for this purpose with a dedicated observer collecting this data for future analysis. Parameters that will be monitored and recorded include:

   - Respiratory rate (# respirations/5 minutes)
   - Blow odor
   - Defecation frequency
   - Position and distance relative to J16 (or other closely associated pod members)
   - Foraging activity; % time spent logging

   RISKS:

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- Close approach provides the same risks outlined above. No additional risks are anticipated.
- Photo documentation involves no anticipated risks.

6. Initial medical treatment via delivery of antibiotics by injection, either via pole syringe or remote delivery dart system. Injections will be administered into the epaxial or other large muscle mass. Needle length will be approximately 2". All injections will be supervised by a veterinarian. Medications List In Order Of Priority (as advised by veterinary team). The antibiotics on this list are intended to address the range of bacterial infections J50 is susceptible to.

   - 2000-3000mg Convenia, SQ or IM once (600kg x 5 mg/kg) – one dose would provide 7-14 days efficacy; or
   - 2000-3000 mg Excede SQ or IM once (600kg x 5 mg/kg) – one dose would provide 5-10 days efficacy

[redacted]

   - Close approach provides the same risks outlined above.
   - Medication injections may have side effects including result in potential abscess, localized pain and inflammation. This is expected to be temporary and localized. More serious side effects such as muscle necrosis are possible but unlikely. Mitigation measure: Experienced personnel with significant experience and appropriate equipment choice.
   - Excede and Convenia are both third generation cephalosporins and adverse effects are not serious and have a relatively low frequency of occurrence.

RESPONSE PERSONEL

The following personnel will be involved in this response at varying points, though the exact configuration of personnel on each boat at any given time will shift depending on needs of the effort and the availability of the individuals involved.

Dr. Joe Gaydos (SeaDoc) Health assessment including diagnostics and medical treatment
Dr. Jim McBain (Sea World) Health assessment including diagnostics and medical treatment
Dr. Hendrik Nollens (Sea World) Health assessment including diagnostics and medical treatment
Dr. Martin Haulena (Vancouver Aquarium) Health assessment including diagnostics and medical treatment
Dr. Brad Hanson (NOAA) Sample collection and vessel driver
Candice Emmons (NOAA) Sample collection and vessel driver
Jeff Foster (Whale Sanctuary Project) Sample collection and vessel driver
Katy Foster (Whale Sanctuary Project) Sample collection and vessel driver
[redacted] Sample collection and vessel driver

[redacted]

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Khanna, Sukriti

From: Girouard, Louise
Sent: August-09-18 4:06 PM
To: Thomson, Andrew; Cottrell, Paul; Thornton, Sheila
Cc: Malikian, Janine; Bate, Dan; Anderson, Laura
Subject: Engagement efforts J50 today

Hi,

We are hearing from NOAA that the is ongoing activity today – any details/reports to share by chance?

L

Louise Girouard
Regional Director Communications | Directrice régionale des communications
Pacific Region | Région du Pacifique
Fisheries, Oceans and Canadian Coast Guard | Pêches, Océans et Garde côtière canadienne
Louise.Girouard@dfo-mpo.gc.ca Tel: 604.666.3855| Cell: [redacted]

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Khanna, Sukriti

From: Girouard, Louise
Sent: August-09-18 6:05 PM
To: Thomson, Andrew; Lowe, Carmel; Cottrell, Paul; Thornton, Sheila
Cc: Sloan, Lara; Bate, Dan; Malikian, Janine; Anderson, Laura
Subject: FOR INFORMATION: Debrief - NOAA/DFO comms call summary

As you will see below – NOAA is planning to issue a statement/update of today's engagement with J50 via social media at some point this evening and provide a more fulsome debrief on the media call tomorrow.

We will share their post on DFOs social media channels but any update you can provide from our contribution today would be greatly appreciated as NHQ is inquiring.

Thank you,

L

From: Jackson, Ashley
Sent: Thursday, August 9, 2018 5:44 PM
To: Morris, Christina <Christina.Morris@dfo-mpo.gc.ca>; Smith, Kathleen <Kathleen.Smith@dfo-mpo.gc.ca>; Northcott, Jennifer <Jennifer.Northcott@dfo-mpo.gc.ca>; Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>; Saindon, Carole <Carole.Saindon@dfo-mpo.gc.ca>; Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.Mcelhone@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Wiebe, Robert <Robert.Wiebe@dfo-mpo.gc.ca>; Hinds, Kimberly <Kimberly.Hinds@dfo-mpo.gc.ca>; Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>; Patrick, Lindsey <Lindsey.Patrick@dfo-mpo.gc.ca>
Subject: Debrief - NOAA/DFO comms call summary

Hello,

A summary of what was covered on the NOAA/DFO comms call

Field update:
- J50 has been sighted. The pod is headed toward Race Rocks area (south of Victoria). Looking to complete the assessment and administer the antibiotics today.
- The Jpod is in Canadian waters. Not clear on direction they are headed.
- NOAA Debrief call to take place at 9pm.

Comms discussion:
- Information that J50 has been sighted and attempts to administer medication is on social media but not yet widely reported.
- NOAA may issue social media tonight if they succeed (or attempt) to administer medication via dart. Details would then be elaborated upon in the morning media tech brief.
- If social is to go forward, NOAA will give a heads up of the tweet to DFO before it goes public.
- Reporters are going to be permitted to go on a NOAA vessel (Sound Guardian) tomorrow. CBC, AP Seattle, Seattle Times (along with a Lummi representative - Northwest Indian Fisheries Commission.) The boat will also serve as the safety vessel and will have chinook on board as a back up feeding vessel. The boat will be leaving at 6am.
- The DFO PAC tweet has been well received and the story is now shifting focus back to saving the animal.

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- A pre-conference for spokes will take place before the 10am media call so that all the speakers are clear on the messaging before the call.
- DFO's media lines will be updated in the morning after the outcome of the evening's efforts are clear.
- Discussion about weekend comms to take place tomorrow.

J35:
- Facebook post planned to explain the behaviour.
- Questions are ongoing around what do to about J35 (eg. captivity or removing the dead calf from its mother). Messaging needs to be iterated that no intervention will take place.

s.21(1)(a) s.21(1)(b)

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Khanna, Sukriti

From: Girouard, Louise
Sent: August-09-18 7:22 AM
To: Thomson, Andrew; Davis, Neil; Lowe, Carmel; Cottrell, Paul; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: For URGENT APPROVAL : J50 - media lines and message to media
Attachments: ML_SRKW_J50_2018-09-08.docx

Importance: High

Good morning,

MinO has requested that we issue a statement to the media prior to the NOAA media briefing at 10 am. Please review and approve the statement below which is going through approvals concurrently in NHQ.

NOTE; Updated media lines are also attached for your information only.

Thanks,

Loiuse

From: Jackson, Ashley
Sent: Thursday, August 9, 2018 7:10 AM
To: Smith, Kathleen <Kathleen.Smith@dfo-mpo.gc.ca>; Northcott, Jennifer <Jennifer.Northcott@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
Cc: Morris, Christina <Christina.Morris@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.Mcelhone@dfo-mpo.gc.ca>; Wiebe, Robert <Robert.Wiebe@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Saindon, Carole <Carole.Saindon@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Hinds, Kimberly <Kimberly.Hinds@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>
Subject: For urgent review: J50 - media lines and message to media
Importance: High

As discussed -- we've prepared a message to media and have revised media lines. For urgent concurrent approvals. I will coordinate any changes here.

MESSAGE TO MEDIA (to be distributed to Pacific's media distribution list)

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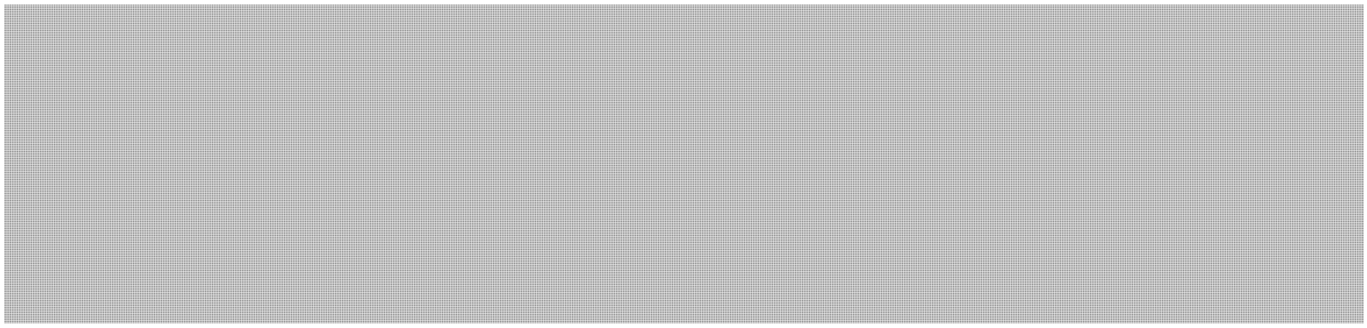

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s.21(1)(a)

s.21(1)(b)

DRAFT

Media Lines
Southern Resident Killer Whale J50

[redacted]

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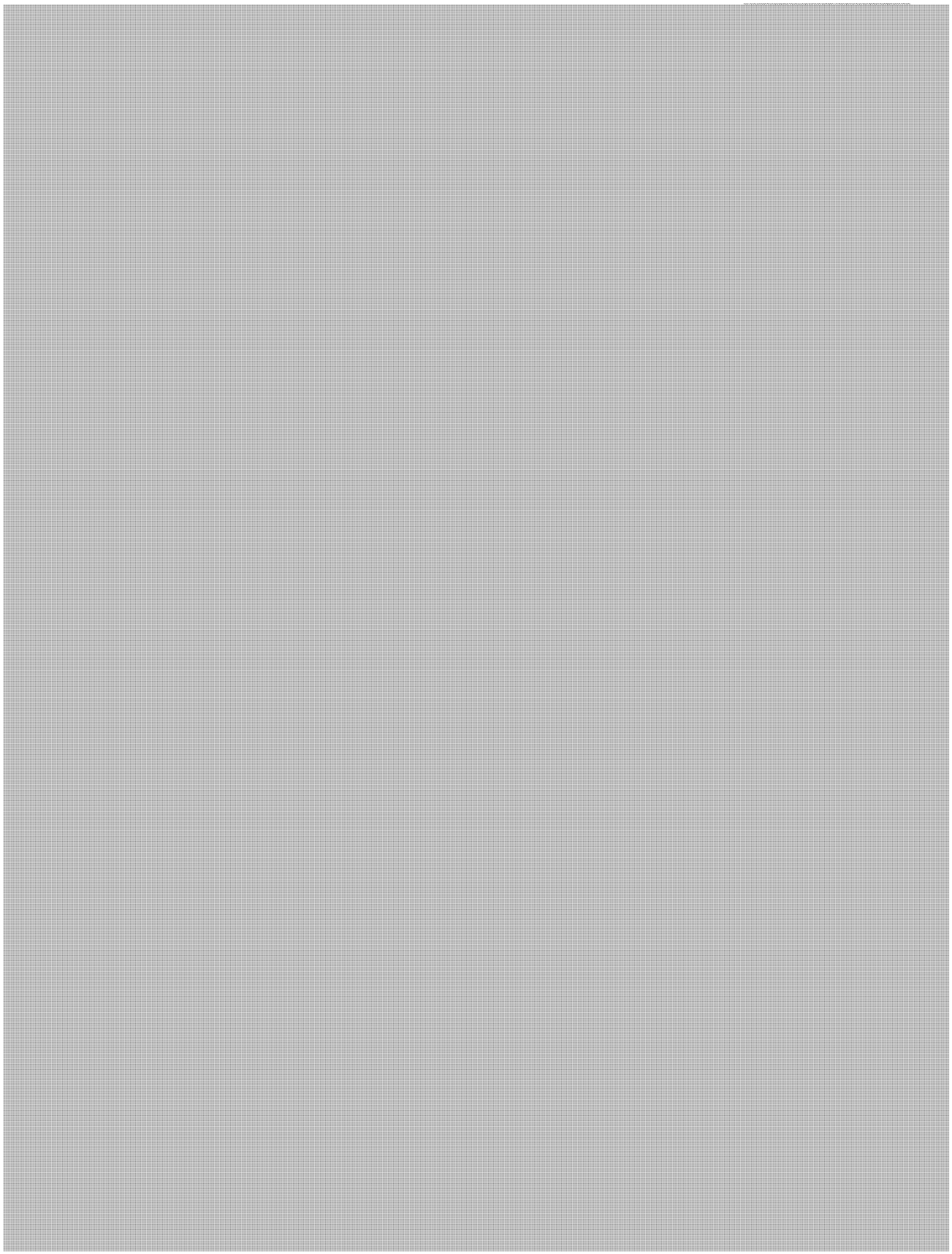
s.21(1)(a)

s.21(1)(b)

DRAFT



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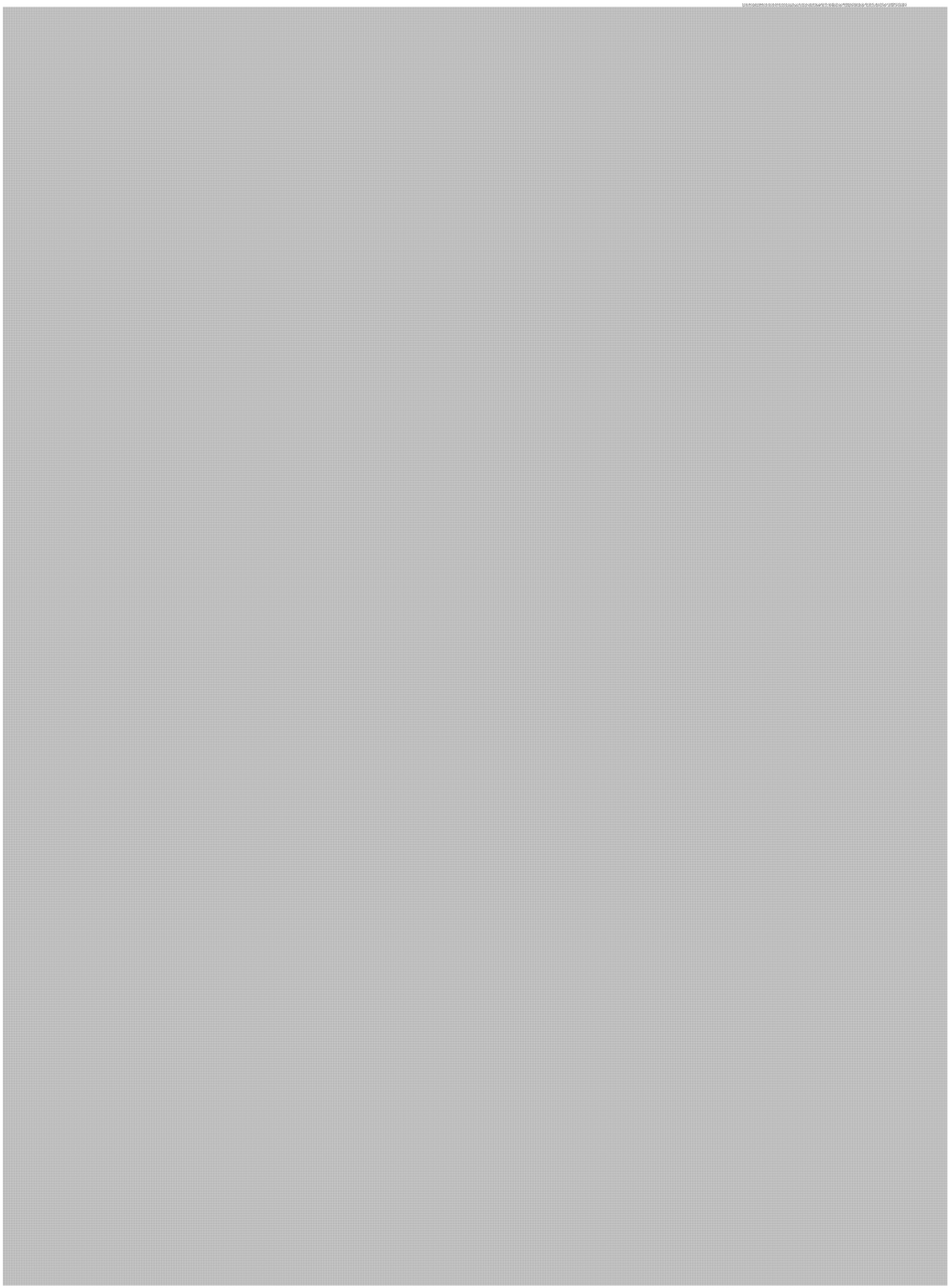
s.21(1)(a)

s.21(1)(b)

DRAFT



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s.21(1)(a)

s.21(1)(b)

DRAFT

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Khanna, Sukriti

From: Harber, Lee
Sent: August-09-18 8:03 AM
To: Cottrell, Paul; Moore, Kendra
Subject: Fw: Action Plan for J50
Attachments: MM- SARA LICENCE APPLICATION.docx

FYI - science to complete application form and evaluate request.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Thursday, August 9, 2018 7:17 AM
To: Harber, Lee
Subject: FW: Action Plan for J50

From: Cottrell, Paul
Sent: Thursday, August 09, 2018 6:24 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50

Hi Teri,
Thank-you so much. Our DFO science folks will evaluate the proposal and resource management will work to draft a licence in anticipation of approval. I have attached a licence application which will need to be completed. Please complete asap so we can draft licence.
Thanks again,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Teri Rowles - NOAA Federal [redacted]
Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

THANK YOU

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Marine Mammal/SARA Licence Application Instructions

The Species at Risk Act (SARA) was proclaimed in June 2003, by the Government of Canada for the protection of species at risk. A licence is required under the authority of the Fisheries (General) Regulations, Marine Mammal Regulations and the Species at Risk Act. This application is to be completed for all research/projects affecting a marine mammal species which is listed as Extirpated, Endangered or Threatened under Canada's Species at Risk Act. Information about the Act, status and location of SARA-listed species can be obtained at the following website: http://www.sararegistry.gc.ca/default_e.cfm. Use this application if your research covers a variety of species that are both listed and non-listed under SARA.

For marine mammal species, including those listed as Special Concern under SARA, a Marine Mammal Licence Application is required and can be obtained from the Program Officer listed at the end of this document.

It is recommended that licence applications be submitted prior to **March 31st** each year and may be submitted pending dates and funding information is tentative. Applications received after **March 31st** will take additional time to process (i.e. up to 8 weeks) due to DFO operational limitations during the summer research period.

You need to apply for a Marine Mammal/SARA Licence when:

Contemplating an activity affecting a marine mammal that is listed as 'Extirpated', 'Endangered' or 'Threatened' on Schedule 1 of the SARA. Species listed as Special Concern are under the authority of the Fisheries (General) Regulations and the Marine Mammal Regulations and therefore require a Marine Mammal Licence.

What kind of activities may be authorized under SARA?

To be successful in your licence application, your activity must fall into one of the following categories under section 73(2) of SARA. The agreement may be entered into, or the licence issued, only if the Minister is of the opinion that:

a) The activity is scientific research relating to the conservation of the species and conducted by qualified persons;
b) The activity benefits the species or is required to enhance its chance of survival in the wild; or
c) Affecting the species is incidental to the carrying out of the activity.

Part I – Applicant Information:

An Animal Care Permit or equivalent is required for research activities with the potential to disturb marine mammals, particularly if permission to capture or conduct invasive sampling is requested. If you believe that you require an ACC authorization and are not affiliated with an academic institution, please contact the DFO Program Officer listed at the end of this document.

Part II – Study/Project Information

Please provide information regarding the logistics of the proposed research and be as accurate as possible. If a study proposal or work plan has been developed, please attach it to your application. Numbers below pertain to the corresponding licence application numbers.

1. Provide Project Title and an abstract (in 100 words or less) that summarizes the proposed research activity.
2. Identify the lead investigator as well as research assistants. Indicate if assistants will be working independently of lead investigator.
3. Indicate all marine mammal species that the research/project will target or potentially impact. Status and location of SARA-listed species can be obtained at the following website: http://www.sararegistry.gc.ca/default_e.cfm
4. Indicate the date and locations where the activity will occur. A listing of DFO Statistical Areas is available at the following website: http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/areas-secteurs/index-eng.html. A "blanket" licence for the entire BC coast will not be issued without a detailed project plan and sufficient justification. Multi-year permits will be issued for a maximum of 3 years for ongoing established research programs.
5. Attach a picture of the research vessel(s), aircraft or aerial drone that will be used and submit with your application. It is the responsibility of the applicant to obtain Foreign Vessel Clearance (FVC) www.state.gov/e/oes/ocns/opa/rvc when a non-Canadian vessel, aircraft or aerial drone, will be used for research purposes in Canadian waters. If you are trailering a US vessel for use in Canadian waters, a Customs Clearance number must be obtained at the Canadian border.

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6. 6(g): When marine mammals or marine mammal parts are to be transferred within British Columbia a Marine Mammal Transfer Licence is required. To transport across provincial or territorial boundaries, a Marine Mammal Transport Licence must be obtained. Please refer to the following website for information on which species require a Convention for the International Trade in Endangered Species (CITES) permit: http://www.cites.org/ to transport across an international boundary.
7. The "Be Whale Wise Guidelines - Marine Wildlife Guidelines for Boaters, Paddlers and Viewers (Revised 2011)" have been established to protect marine mammals from disturbance or harassment. Copies of the guidelines can be obtained online or from the Program Officer.
8. Self Explanatory
9. A detailed description of the project is necessary to assess potential impacts on the species of concern and other non targeted species. Please be specific as to the number, duration and distance of approach, restraints or sampling periods. If available, a work plan or proposal is useful in providing an assessment of the project. Attach field collection methods and techniques.

Part III – Impact and Mitigation Assessment

10. It is important to list all SARA-listed species and non-SARA listed species that may occur in the proposed research area and the anticipated harassments and/or mortalities for each.
11. Describe in detail anticipated or potential disturbances or mortalities to all species listed in Section 10 and include impacts on habitat(s) used by the species. List each species, the nature of harm, and rank the likelihood of harm or encounters (High, Medium, Low).
12. For information on Section 73(3) pre-conditions of SARA refer to: http://www.sararegistry.gc.ca/default_e.cfm. Pre-conditions (a) and (b) require that alternative measures such as area and/or time changes or changes to sampling gear or techniques must be considered and implemented if feasible before a licence can be issued. For pre-condition (c), please indicate (to the best of your knowledge) whether the proposed research activity, given (a) and (b), will jeopardize survival or recovery of the species. For the Minister of Fisheries and Oceans to be of the opinion that all of the pre-conditions laid out in Section 73(3) have been met, the onus is on the project proponent to do the following:
    - Be proactive in their research design,
    - Demonstrate awareness of the provisions of SARA, and
    - Demonstrate that measures are being taken to minimise harm to listed species, and that they have considered all alternatives to carrying out the activity.

Part IV – SARA Recovery Planning Evaluation

13. Copies of final Recovery Strategies, Action Plans and Management Plans are available on the SARA website: http://www.sararegistry.gc.ca/default_e.cfm. If recovery planning for the species under consideration has not been initiated, please indicate to the best of your ability how your proposed research/project supports species recovery.

Are other licences still required?

A Marine Mammal/SARA licence does not constitute an authorization to access property or supersede, cover or replace the need for other applicable authorizations which are the responsibility of the applicant., i.e. Foreign Vessel Clearance, National Wildlife Area research permits, Convention for the International Trade in Endangered Species (CITES) permits, Migratory Bird permits, additional Fisheries Act licences or Provincial permits under the BC Wildlife Act.

Submitting Your Application:

Please contact the undersigned if you have any questions and send your completed application via fax or email to:

Annely Greene
DFO Marine Mammal Program Officer
Fisheries & Oceans Canada – Pacific Region
401 Burrard Street, Vancouver, BC V6C 3S4

Phone: 604-666-0071 Email: Annely.Greene@dfo-mpo.gc.ca

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Marine Mammal/SARA Licence Application

Fisheries & Oceans Canada – Pacific Region

Please use **TAB key to move between fields for check boxes**

PART I - APPLICANT INFORMATION

Date:

Name:

Organization:

Street:

City:

Province/State:

Country: Postal Code/Zip:

Phone: Cellular: Fax:

Email:

Applicant Experience/Credentials: List relevant research programs, publications and/or attach CV.

Do you or your organization hold an Animal Care Committee Permit for this work? Yes ☐ No ☐

Attach copy to application - Permit # If no, explain why *(Refer to Part I – Applicant Information).*

List previous issued Marine Mammal/SARA licence numbers:

PART II - STUDY/PROJECT INFORMATION

1. **Project Title:**

   Project Abstract:

2. **Personnel:**

   Lead Investigator: _____

   Assistants:

3. **Species Information:**

   Species Studied:

4. **Dates & Location:**

   Study Period: From: _____ To:

Are you requesting a multi-year licence? If yes, state reason for request below. Yes ☐ No ☐

(Refer to Part II, Item 3 of the Instructions)

Study Area/Location: _____

(For DFO Statistical areas refer to Part II, Item 4 of the instructions)

5. **Vessel/Aircraft/Aerial Drone Information:** Attach photograph of research vessel(s) with your application.

   Name(s): _____

   Registration #: _____

   Country of Registration: _____

If vessel, aircraft or aerial drone is registered outside of Canada, have you applied for Foreign Vessel Clearance? Yes ☐ No ☐ *(If no, please refer to Part II, Item 5 of the Instructions)*

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Comment:

METHODOLOGY:

6.	Will animals be subjected to invasive sampling? Invasive sampling includes any methodology that involves capture and restraint of animals, direct or remote sampling of blood or tissues and the attachment of any apparatus to the marine mammal.	Yes	☐	No	☐
	a) If yes, how many samples will be taken?				
	a) Will live animals be collected?	Yes	☐	No	☐
	b) If yes, how many animals will be collected?				
	c) Will live animals be transported from one marine environment to another marine environment or holding facility?	Yes	☐	No	☐
	d) If yes, state location and rationale:				
	e) If yes to d) will animals be returned into the marine environment in the future?	Yes	☐	No	☐
	f) If yes, state location and rationale:				
	g) Will animals, specimens or samples be transported?	Yes	☐	No	☐
	i) Within British Columbia?	Yes	☐	No	☐
	ii) To another Province or Territory in Canada	Yes	☐	No	☐
	iii) Across an international boundary? *(Refer to Part II, Item 5 CITES in the Instructions)*	Yes	☐	No	☐
7.	Do you propose to be in contravention of regionally posted guidelines (Be Whale Wise Guidelines – for Boaters, Paddlers and Viewers) for any planned activity? If yes explain rationale. (*Refer to Part II, Item 7 of the Instructions)*	Yes	☐	No	☐
8.	Objective of Research/Project:				
9.	Explain field collections/study techniques. Attach project work plan/proposal if available.				

PART III – IMPACT ASSESSMENT

10.	SARA Species to be included in Permit:	Anticipated # of mortalities for each species:
	Non-SARA Species to be included in Permit:	Anticipated # of mortalities for each species:

11. Describe anticipated or potential disturbances to the identified species, other species and/or the habitat:

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12. Based on the pre-conditions in Section 73(3) of SARA, the proponent should specify:
(addressing a through c is mandatory for SARA species – see instructions)

a) What alternatives to the proposed method of conducting the activity have you considered? How is the chosen method the best solution to reduce impact to the species?

b) What mitigation measures have been included, and how do they minimize the potential impacts on listed species and/or habitats? What mitigation measures have been considered and not included, and for what reasons were they rejected?

c) Will the activities you plan to undertake jeopardize survival or recovery of the species, in light of measures in 12(a) and 12(b) above? If not, why not?

PART IV – SARA RECOVERY PLANNING EVALUATION

13. Has the proposed project/study been recommended in a SARA Recovery Strategy, Action Plan or Management plan? Please identify section.

14. Will the proposed project/study assist in the recovery of the species identified? Please explain.

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Khanna, Sukriti

From: Gilchrist, Brett
Sent: August-09-18 9:53 AM
To: Cottrell, Paul
Cc: Moore, Kendra
Subject: FW: Action Plan for J50
Attachments: MECTS-#3950132-v1-MECTS-#3950123-v1-MECTS-#3949785-v1-NOAA_SECTION_38_AUTHORIZATION_AUG_9_ho_comments.DOC; MECTS-#3950156-v1-J50-Memo-RD_e.DOCX

Importance: High

As per the email below, please use the attached products. The authorization to be tweaked as discussed in yellow text, and the memo so that we have a signature from Andy for the authorization.

Let me know if you have any questions.

On a personal note well done on all the hard work on this.

Brett

From: Gilchrist, Brett
Sent: August-09-18 12:16 PM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew; Olson, Heather (DOJ) (heather.olson@justice.gc.ca); Burns, Adam
Subject: RE: Action Plan for J50
Importance: High

Sorry, folks, please use this document attached noting we need to fill in the timelines for the issuance as well, as highlighted.

The memo is attached for your use if you need it as well.

Brett

From: Gilchrist, Brett
Sent: August-09-18 11:59 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew; Olson, Heather (DOJ) (heather.olson@justice.gc.ca); Burns, Adam
Subject: RE: Action Plan for J50

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[redacted]

Let me know if you have any questions.

Brett
613-993-2055

From: Cottrell, Paul
Sent: August-09-18 11:33 AM
To: Gilchrist, Brett; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew
Subject: RE: Action Plan for J50

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Gilchrist, Brett
Sent: Thursday, August 09, 2018 8:29 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Brett

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Cottrell, Paul
Sent: August-09-18 11:24 AM
To: Moore, Kendra; Harber, Lee
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Thanks,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Moore, Kendra
Sent: Thursday, August 09, 2018 8:17 AM
To: Harber, Lee; Cottrell, Paul
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

Hi Lee,

We will be using a section 38 authorization under the Marine Mammal Regulations, not a permit under SARA. We have drafted an authorization template for your region's review and will be sending it shortly. Based on Science's evaluation of NOAA's application, the approved activities must be included within the section 38 authorization.

Kendra

From: Harber, Lee
Sent: August-09-18 11:03 AM
To: Cottrell, Paul; Moore, Kendra
Subject: Fw: Action Plan for J50

FYI - science to complete application form and evaluate request.

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Sent from my BlackBerry 10 smartphone on the Rogers network.

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Sent: Thursday, August 09, 2018 6:24 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50

Hi Teri,
Thank-you so much. Our DFO science folks will evaluate the proposal and resource management will work to draft a licence in anticipation of approval. I have attached a licence application which will need to be completed. Please complete asap so we can draft licence.
Thanks again,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

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Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

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Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

THANK YOU

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039, KILLER WHALE

AUTHORIZATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL

PURSUANT TO SECTION 38 OF THE *MARINE MAMMAL REGULATIONS*, SECTION 52 OF THE *FISHERY (GENERAL) REGULATIONS*, AND SECTION 74 OF THE *SPECIES AT RISK ACT*, THIS AUTHORIZATION IS HEREBY GIVEN TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL. THE AUTHORIZATION IS VALID ANYWHERE IN CANADIAN FISHERIES WATERS IN THE PACIFIC OCEAN WHERE FISHERIES AND OCEANS CANADA (DFO) ADMINISTERS THE AQUATIC RESOURCES AND OCEAN SPACE.

THE AUTHORIZATION IS VALID ONLY IN ACCORDANCE WITH THE FOLLOWING CONDITIONS SPECIFIED PURSUANT TO SUBSECTION 38(2) OF THE *MARINE MAMMAL REGULATIONS*:

1. THE OPERATIONS AUTHORIZED UNDER THIS AUTHORIZATION WILL INCLUDE THE FOLLOWING:
I) INTERACTING WITH A MARINE MAMMAL INCLUDING KILLER WHALES FOR THE PURPOSES OF **[specific description of the activity being authorized should be provided]**;
II) APPROACHING A KILLER WHALE WITH A VEHICLE WITHIN A DISTANCE OF LESS THAN 200 METRE DISTANCE;
III) DOCUMENTATION AND PHOTOGRAPHY OF MARINE MAMMALS;
IV) THE COLLECTION OF ANY BIOLOGICAL SAMPLES REQUESTED FROM FISHERIES AND OCEANS CANADA.

2. THE AUTHORIZED PERSONNEL FOR THE ABOVE OPERATIONS SHALL BE AS FOLLOWS:
DR. TERRI ROWLES, THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.
NAME OF INDIVIDUAL(S), NAME OF ORGANIZATION**[include all response team members]**

ACTIVITIES CARRIED OUT UNDER THE AUTHORITY OF THIS AUTHORIZATION SHALL ONLY BE CONDUCTED UNDER THE DIRECT SUPERVISION OF THE AUTHORIZATION HOLDER OR AUTHORIZED INDIVIDUALS AS LISTED ABOVE. THE AUTHORIZATION HOLDER IS RESPONSIBLE TO ENSURE THAT AN AUTHORIZED INDIVIDUAL IS PRESENT DURING ANY ACTIVITY AUTHORIZED UNDER THIS AUTHORIZATION.

3. THE RESPONSE ACTIVITY SHALL TAKE PLACE IN THE WATERS OF THE PACIFIC REGION THAT ARE PARTS OF AREAS UNDER THE ADMINISTRATION OF DFO;

4. THE FOLLOWING DFO REGIONAL STAFF SHALL BE ADVISED IMMEDIATELY ON COMMENCEMENT OF ANY OPERATIONS:
PACIFIC REGION: PAUL COTTRELL (604) 240-3841

5. AN INCIDENT REPORT SHALL BE MADE DETAILING SPECIES IDENTIFICATION, EFFORTS MADE TO SAVE THE ANIMAL, CONDITION OF THE ANIMAL AT THE COMMENCMENT AND AT THE END OF THE OPERATON, LOCATION (COORDINATES) OF THE OPERATION, NAMES OF ALL INVOLVED IN THE OPERATION, ANY OTHER OBSERVATIONS RELEVANT TO INCIDENT;

6. A QUARTERLEY REPORT INCLUDING LOCATIONS, SPECIES, NUMBERS AND OBSERVATIONS SHALL BE PROVIDED TO DFO PACIFIC REGION REGIONAL COORDINATOR:

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PAUL COTTRELL, PAUL.COTTRELL@DFO-MPO.GC.CA

7. THAT A COPY OF THIS AUTHORIZATION SHALL BE CARRIED BY ALL PERSONNEL ENGAGED IN THE RESPONSE OPERATIONS. GOVERNMENT ISSUED IDENTIFICATION DOCUMENTS ARE REQUIRED FOR ANYONE ACTING UNDER THE AUTHORITY OF THIS AUTHORIZATION. THE AUTHORIZATION AND ANY PERSON WORKING UNDER ITS AUTHORITY MUST BE AVAILABLE FOR INSPECTION UPON REQUEST BY A FISHERY OFFICER OR FISHERY GUARDIAN;

8. THE AUTHORIZATION HOLDER MUST HAVE APPROPRIATE, CURRENT LIABILITY INSURANCE AND/OR APPROPRIATE, CURRENT WORKERS COMPENSATION COVERAGE IN PLACE THAT COVERS ACTIVITIES UNDERTAKEN IN ALL PROVINCES COVERED BY THIS AUTHORIZATION THROUGHOUT THE DURATION OF THE CONTRACT. COPIES OF THIS DOCUMENTATION MUST BE PROVIDED TO THE DFO IN ADVANCE OF COMMENCEMENT OF THE AUTHORIZED ACTIVITIES.

9. THE AUTHORIZATION HOLDER AGREES THAT IT IS FULLY LIABLE FOR ANY DAMAGES THAT IT CAUSES TO ANY THIRD PARTY IN CONNECTION WITH ACTIVITIES AUTHORIZED BY THE AUTHORIZATION, REGARDLESS OF WHETHER THE THIRD PARTY MAKES ITS CLAIM AGAINST CANADA OR THE AUTHORIZATION HOLDER. IF CANADA IS REQUIRED, AS A RESULT OF JOINT AND SEVERAL LIABILITY, TO PAY A THIRD PARTY IN RESPECT OF DAMAGES CAUSED BY THE AUTHORIZATION HOLDER, THE AUTHORIZATION HOLDER MUST REIMBURSE CANADA FOR THAT AMOUNT.

10. IF ACTIVITIES AUTHORIZED BY THIS AUTHORIZATION ARE CONDUCTED WHILE ON A DFO VESSEL, THE AUTHORIZATION HOLDER WILL ENSURE THAT PERSONS ENGAGED IN THIS ACTIVITY WEAR APPROPRIATE SAFETY EQUIPMENT DURING THE ENTIRE LENGTH OF THE ACTIVITY. SAFETY EQUIPMENT INCLUDES, BUT MAY NOT BE LIMITED TO, PERSONAL PROTECTION EQUIPMENT THAT MEETS CANADIAN SAFETY STANDARDS.

11. THIS AUTHORIZATION AND CONDITIONS CANCEL AND REPLACE ANY PREVIOUS AUTHORIZATION AND CONDITION ISSUED TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION FOR THE PURPOSE OF CONDUCTING RESPONSE OPERATIONS;

13. THIS AUTHORIZATION IS VALID FROM DATE OF ISSUANCE TO AUGUST 9, 2018;

14. THE ISSUANCE OF THIS AUTHORIZATION IMPLIES NO COMMITMENT BY THE MINISTER OR THE DEPARTMENT TO REISSUE THE AUTHORIZATION IN SUBSEQUENT YEARS.

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s.21(1)(a)

s.21(1)(b)

s.23

UNCLASSIFIED

MEMORANDUM FOR THE REGIONAL DIRECTOR
RESOURCE MANAGEMENT

ISSUANCE OF AN ANTHORIZATION TO DISTURB MARINE MAMMALS TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

(FOR DECISION)

SUMMARY OF ADVICE TO MINISTER

[redacted]

s.21(1)(a)
s.21(1)(b)

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[redacted]

Lee Harber
Marine Mammal Advisor
Resource Management

(Signature block below is for decision only)(Please remove before printing)

☐ I concur with the recommendations

☐ I do not concur with the recommendations

Andrew Thomson
Regional Director
Resource Management

Attachment(s): (#) *(if applicable)*

TAB 1 – Template of the authorization to be issued to NOAA

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Khanna, Sukriti

From: Davis, Neil
Sent: August-09-18 4:09 PM
To: Mar, Amy; Eros, Carole; Brekke, Heather; Cottrell, Paul; Harber, Lee; Thar, Jonathan; Spence, Brenda; Johansen, Jeff
Subject: FW: ROCS Update - Week of August 6, 2018

fyi

From: Chin, Jena
Sent: Thursday, August 9, 2018 1:13 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: O'Grady, Liane <Liane.OGrady@dfo-mpo.gc.ca>; Carlson, Mike <Mike.Carlson@dfo-mpo.gc.ca>; Fulks, Jay <Jay.Fulks@dfo-mpo.gc.ca>; Masson, Colin <Colin.Masson@dfo-mpo.gc.ca>; Murdoch, Sarah <Sarah.Murdoch@dfo-mpo.gc.ca>; Gotch, Steve <Steve.Gotch@dfo-mpo.gc.ca>; Bate, Angela <Angela.Bate@dfo-mpo.gc.ca>; Nener, Jennifer <Jennifer.Nener@dfo-mpo.gc.ca>; Brown, Laura (Pacific) <Laura.L.Brown@dfo-mpo.gc.ca>; Collie, Tyler <Tyler.Collie@dfo-mpo.gc.ca>; Kotyk, Mel <Mel.Kotyk@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Smith, Ken <Ken.Smith@dfo-mpo.gc.ca>; Cheung, Alice <Alice.Cheung@dfo-mpo.gc.ca>; Gallant, Nicole <Nicole.Gallant@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>; Kerr, Lisa <Lisa.Kerr@dfo-mpo.gc.ca>; Russow, Theona <Theona.Russow@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Webb, Allison <Allison.Webb@dfo-mpo.gc.ca>; Whelan, Christie <Christie.Whelan@dfo-mpo.gc.ca>; Prince, Dave <Dave.Prince@dfo-mpo.gc.ca>; Kennedy, Eddy <Eddy.Kennedy@dfo-mpo.gc.ca>; Holmes, John <John.Holmes@dfo-mpo.gc.ca>; Taylor, Nathan <Nathan.Taylor@dfo-mpo.gc.ca>; Houston, Kim <Kim.Houston@dfo-mpo.gc.ca>; MacDougall, Lesley <Lesley.MacDougall@dfo-mpo.gc.ca>; Klaver, March <March.Klaver@dfo-mpo.gc.ca>; Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Bonnet, Terri <Terri.Bonnet@dfo-mpo.gc.ca>; Wong, Cindy <Cindy.Wong@dfo-mpo.gc.ca>; Wakelin, Amy E <Amy.Wakelin@dfo-mpo.gc.ca>; Kelly, Gerry <Gerry.Kelly@dfo-mpo.gc.ca>; Parslow, Matthew <Matthew.Parslow@dfo-mpo.gc.ca>; Stevens, Linda <Linda.Stevens@dfo-mpo.gc.ca>; Nantel, Martin <Martin.Nantel@dfo-mpo.gc.ca>; Stadel, Angela <Angela.Stadel@dfo-mpo.gc.ca>; Spencer, Kent <Kent.Spencer@dfo-mpo.gc.ca>
Subject: ROCS Update - Week of August 6, 2018

Hi Andy,

Here are this week's ROCS submissions.

Health of Juvenile Southern Resident Killer Whale "J50"
US and Canadian scientists have raised concerns that J50, a juvenile female member of the Southern Resident Killer Whale population, is likely starving and possibly suffering from infection. Her body condition is comparable with past situations where individuals have died. Given the limited number of females in such a small population (75 individuals), it would be a significant setback to the population to lose this individual.

The situation is attracting significant media attention and the US National Oceanic and Atmospheric Administration (NOAA) has drafted several proposals for potential emergency intervention that were shared with DFO late last week to address the body condition of J50. These include supplemental feeding of fish in the wild off the back of a boat (Lummi Nation vessels in Washington have completed trials runs); delivery of medicated fish for feeding to J50; injection of medication with a dart; and penning J50 to enable hydration, feeding, and medication.

NOAA has been consulting with several Canadian officials to discuss the condition of J50 and the potential for intervention (on the Canadian side: Sheila Thornton (DFO Science), Paul Cottrell (DFO Marine Mammal Unit),

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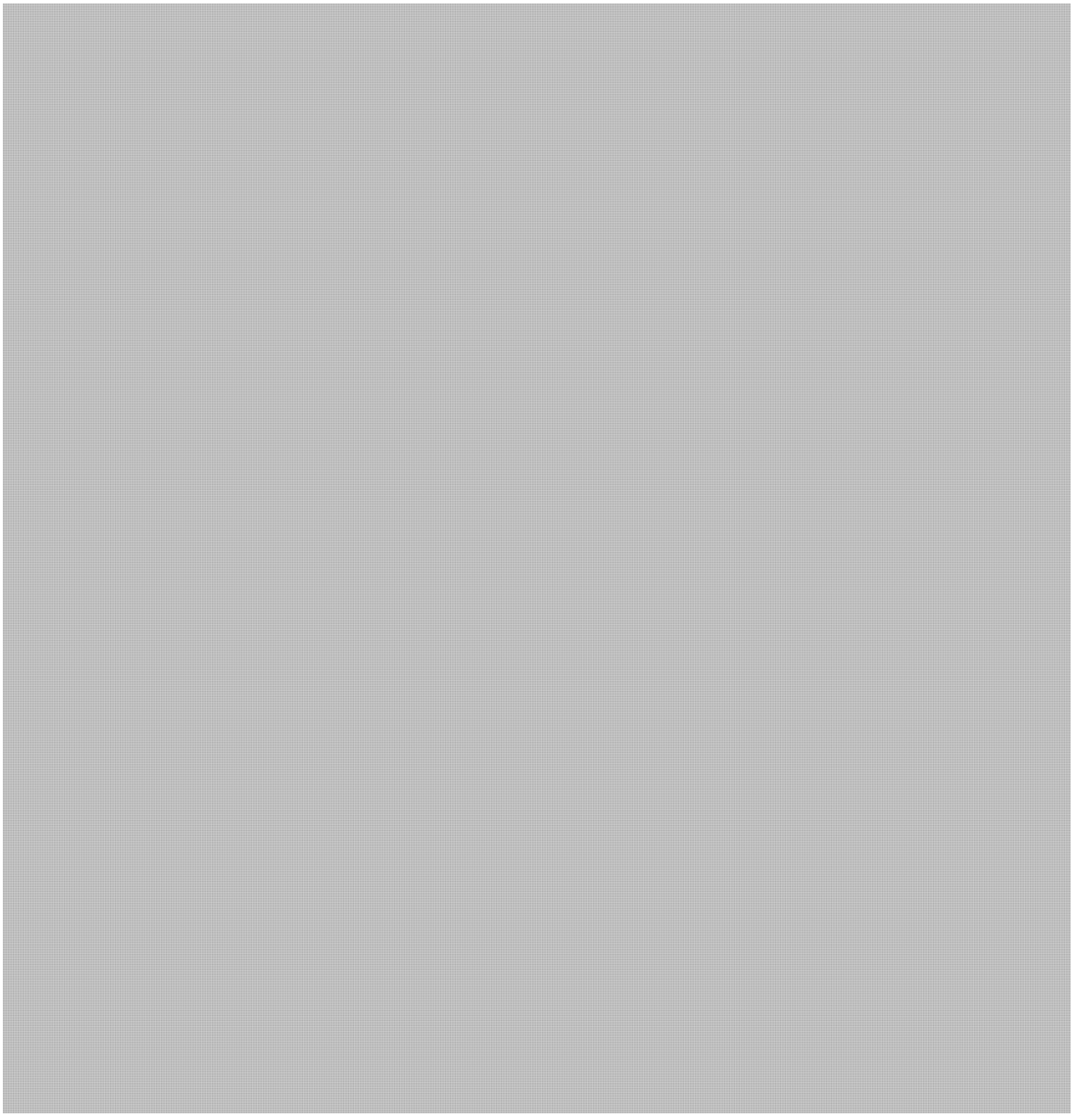
veterinarian Stephen Raverty (Province of BC), and veterinarian Marty Haulena (Oceanwise)). DFO Pacific region is considering licensing that would allow for the US to approach and potentially feed and/or medicate J50 in Canadian waters; this includes an assessment of whether the proposed interventions may pose more risk than benefit to J50 and other members of J pod. NOAA is holding daily media briefings on the issue, which DFO technical staff are attending. DFO staff also continue to collaborate with NOAA officials and other partners to gather more information on the potential causes of J50's poor health. On Wednesday evening, NOAA officials indicated that they are prepared to proceed with "nutritional support therapy" (attempting to feed fish to J50 in the wild) should they be able to position the designated vessels to do so. DFO Communications has also drafted a press release that describes how DFO is responding to this situation.



Pages 2127 to / à 2131

are withheld pursuant to sections

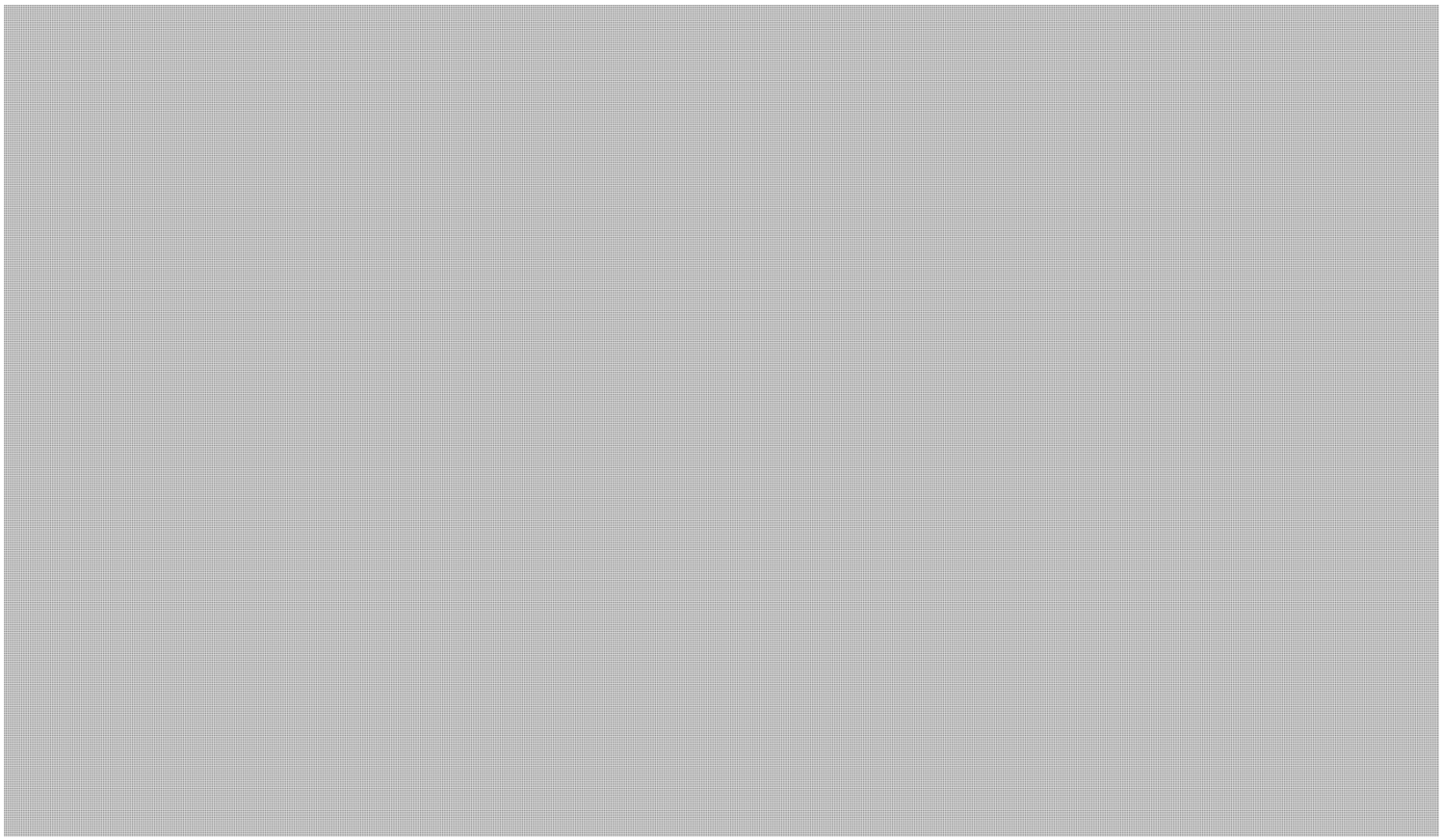
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

s.21(1)(a) s.21(1)(b) Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.



Cheers,

Jena Chin
Integrated Aboriginal Programs Coordinator
Aboriginal Programs Division
Jena.Chin@dfo-mpo.gc.ca
Tel: 604.666.2410

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Khanna, Sukriti

From: Lowe, Carmel
Sent: August-09-18 2:58 PM
To: Cottrell, Paul
Cc: Thomson, Andrew; Kennedy, Eddy
Subject: FW: URGENT SRKW request

Paul – see below. Is this something you can do?

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7

Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

From: Higgins, Linda
Sent: August 9, 2018 2:56 PM
To: Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Cc: Ford, Leanne <Leanne.Ford@dfo-mpo.gc.ca>
Subject: RE: URGENT SRKW request

We have officers around Port Renfrew and we are trying to raise them on the radio and will divert if we can. In the meantime, we can contact whale watching companies to let them know to stay back. If you have information on those companies, please let me know.
Otherwise, it might be worthwhile for Paul to broadcast a radio message from on site, telling people to stay away.

I will update you as I learn more.

Linda Higgins

South Coast Area Chief, Conservation and Protection
Fisheries and Oceans Canada/Government of Canada
Linda.Higgins@dfo-mpo.gc.ca Tel: 250 754-0221 / Cel: [redacted]

Chef Secteur de la côte sud, Conservation et Protection
Pêches et Océans Canada / Gouvernement du Canada
Linda.Higgins@dfo-mpo.gc.ca Tél: 250 754-0221 / Cel: [redacted]

"This electronic mail message is intended only for the use of the party (ies) to whom it is addressed. This message may contain information that is privileged, personal or confidential. Any use

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of the information by anyone other than the intended recipient(s) is prohibited. If you receive this message in error, please notify the sender immediately (250) 754-0221 and delete both the original message and all copies. Thank you.

Ce courrier électronique est réservé à l'usage des personnes auxquelles il s'adresse. Ce message peut contenir de l'information protégée, personnelle ou confidentielle. Toute utilisation de l'information par des personnes autres que celles auxquelles il s'adresse est interdite. Si vous avez reçu ce message par erreur, veuillez en aviser immédiatement l'expéditeur (250) 754-0221 et détruisez le message original ainsi que les copies. Merci."

From: Lowe, Carmel
Sent: Thursday, August 9, 2018 2:34 PM
To: Higgins, Linda <Linda.Higgins@dfo-mpo.gc.ca>
Subject: FW: URGENT SRKW request

See below.... Do you have anyone off Sooke now?

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7

Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

From: Lowe, Carmel
Sent: August 9, 2018 2:28 PM
To: Carlson, Mike <Mike.Carlson@dfo-mpo.gc.ca>
Cc: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: URGENT SRKW request

Mike
J50 has been spotted off Sooke and US are enroute there to commence health assessment and potential mediation application. Our team has indicated that the US team should arrive on-site in approx. 10 mins – but they are also reporting that there are about 20 whale watching boat in vicinity of this and the other whales and in order to minimize disturbance are requesting C&P support to keep the WW boats away during the US operations – I think they are recommending buffer zone of 500m or so....

Is this possible – please advise?

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada

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Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7

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Telephone | Téléphone 250-756-7177
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Government of Canada | Gouvernement du Canada

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s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Thomson, Andrew
Sent: August-09-18 8:02 AM
To: Girouard, Louise; Cottrell, Paul; Davis, Neil; Lowe, Carmel; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl; Jackson, Ashley
Subject: Re: For URGENT APPROVAL : J50 - media lines and message to media

Yes

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Girouard, Louise
Sent: Thursday, August 9, 2018 8:01 AM
To: Thomson, Andrew; Cottrell, Paul; Davis, Neil; Lowe, Carmel; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl; Jackson, Ashley
Subject: RE: For URGENT APPROVAL : J50 - media lines and message to media

Andy – please see revision from NHQ for your approval. Thanks

[redacted]

-A

MESSAGE TO MEDIA (to be distributed to Pacific's media distribution list)

[redacted]

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[redacted]

From: Thomson, Andrew
Sent: Thursday, August 9, 2018 7:32 AM
To: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>
Cc: Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>; Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Subject: Re: For URGENT APPROVAL : J50 - media lines and message to media

[redacted]

From: Cottrell, Paul
Sent: Thursday, August 9, 2018 7:25 AM
To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Lowe, Carmel; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian,

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s.21(1)(a)

s.21(1)(b)

Janine;
Webb,
Cheryl
Subject:
RE: For
URGENT
APPROVAL
: J50 -
media lines
and
message to
media

Hi Louis,

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Girouard, Louise
Sent: Thursday, August 09, 2018 7:21 AM
To: Thomson, Andrew; Davis, Neil; Lowe, Carmel; Cottrell, Paul; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: For URGENT APPROVAL : J50 - media lines and message to media

Good morning,

[redacted]

NOTE; Updated media lines are also attached for your information only.

Thanks,

Loiuse

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s.21(1)(a)

s.21(1)(b)

From: Jackson, Ashley
Sent: Thursday, August 9, 2018 7:10 AM
To: Smith, Kathleen <Kathleen.Smith@dfo-mpo.gc.ca>; Northcott, Jennifer <Jennifer.Northcott@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
Cc: Morris, Christina <Christina.Morris@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.Mcelhone@dfo-mpo.gc.ca>; Wiebe, Robert <Robert.Wiebe@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Saindon, Carole <Carole.Saindon@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Hinds, Kimberly <Kimberly.Hinds@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>
Subject: For urgent review: J50 - media lines and message to media
Importance: High

As discussed -- we've prepared a message to media and have revised media lines. For urgent concurrent approvals. I will coordinate any changes here.

MESSAGE TO MEDIA (to be distributed to Pacific's media distribution list)

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Thomson, Andrew
Sent: August-09-18 7:32 AM
To: Cottrell, Paul; Girouard, Louise; Davis, Neil; Lowe, Carmel; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: Re: For URGENT APPROVAL : J50 - media lines and message to media

[redacted]

From: Cottrell, Paul
Sent: Thursday, August 9, 2018 7:25 AM
To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Lowe, Carmel; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: RE: For URGENT APPROVAL : J50 - media lines and message to media

Hi Louis,

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Girouard, Louise
Sent: Thursday, August 09, 2018 7:21 AM
To: Thomson, Andrew; Davis, Neil; Lowe, Carmel; Cottrell, Paul; Thornton, Sheila

s.21(1)(a) s.21(1)(b)

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Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: For URGENT APPROVAL : J50 - media lines and message to media

Good morning,

[redacted]

NOTE; Updated media lines are also attached for your information only.

Thanks,

Loiuse

From: Jackson, Ashley
Sent: Thursday, August 9, 2018 7:10 AM
To: Smith, Kathleen <Kathleen.Smith@dfo-mpo.gc.ca>; Northcott, Jennifer <Jennifer.Northcott@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
Cc: Morris, Christina <Christina.Morris@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.Mcelhone@dfo-mpo.gc.ca>; Wiebe, Robert <Robert.Wiebe@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Saindon, Carole <Carole.Saindon@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Hinds, Kimberly <Kimberly.Hinds@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>
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As discussed -- we've prepared a message to media and have revised media lines. For urgent concurrent approvals. I will coordinate any changes here.

MESSAGE TO MEDIA (to be distributed to Pacific's media distribution list)

[redacted]

s.21(1)(a) s.21(1)(b)

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Khanna, Sukriti

From: Davis, Neil
Sent: August-09-18 7:28 AM
To: Cottrell, Paul; Girouard, Louise; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: Re: For URGENT APPROVAL : J50 - media lines and message to media

Indigenous peoples - no apostrophe. Otherwise ok.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Thursday, August 9, 2018 7:25 AM
To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Lowe, Carmel; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: RE: For URGENT APPROVAL : J50 - media lines and message to media

Hi Louis,

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Girouard, Louise
Sent: Thursday, August 09, 2018 7:21 AM
To: Thomson, Andrew; Davis, Neil; Lowe, Carmel; Cottrell, Paul; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: For URGENT APPROVAL : J50 - media lines and message to media

Good morning,

[redacted]

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s.21(1)(a)

s.21(1)(b)

NOTE; Updated media lines are also attached for your information only.

Thanks,

Loiuse

From: Jackson, Ashley
Sent: Thursday, August 9, 2018 7:10 AM
To: Smith, Kathleen <Kathleen.Smith@dfo-mpo.gc.ca>; Northcott, Jennifer <Jennifer.Northcott@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
Cc: Morris, Christina <Christina.Morris@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.Mcelhone@dfo-mpo.gc.ca>; Wiebe, Robert <Robert.Wiebe@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Saindon, Carole <Carole.Saindon@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Hinds, Kimberly <Kimberly.Hinds@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>
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Importance: High

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MESSAGE TO MEDIA (to be distributed to Pacific's media distribution list)

[redacted]

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Khanna, Sukriti

From: Girouard, Louise
Sent: August-09-18 7:27 AM
To: Cottrell, Paul
Subject: Re: For URGENT APPROVAL : J50 - media lines and message to media

Thanks Paul. Do you have a moment to call me. 604 666 3855. :)

From: Cottrell, Paul
Sent: Thursday, August 9, 2018 7:25 AM
To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Lowe, Carmel; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: RE: For URGENT APPROVAL : J50 - media lines and message to media

Hi Louis,

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Girouard, Louise
Sent: Thursday, August 09, 2018 7:21 AM
To: Thomson, Andrew; Davis, Neil; Lowe, Carmel; Cottrell, Paul; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: For URGENT APPROVAL : J50 - media lines and message to media

Good morning,

[redacted]

NOTE; Updated media lines are also attached for your information only.

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s.21(1)(a)

s.21(1)(b)

Thanks,

Loiuse

From: Jackson, Ashley
Sent: Thursday, August 9, 2018 7:10 AM
To: Smith, Kathleen <Kathleen.Smith@dfo-mpo.gc.ca>; Northcott, Jennifer <Jennifer.Northcott@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
Cc: Morris, Christina <Christina.Morris@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.Mcelhone@dfo-mpo.gc.ca>; Wiebe, Robert <Robert.Wiebe@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Saindon, Carole <Carole.Saindon@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Hinds, Kimberly <Kimberly.Hinds@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>
Subject: For urgent review: J50 - media lines and message to media
Importance: High

As discussed -- we've prepared a message to media and have revised media lines. For urgent concurrent approvals. I will coordinate any changes here.

MESSAGE TO MEDIA (to be distributed to Pacific's media distribution list)

[redacted]

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Antcliffe, Bonnie
Sent: August-09-18 7:25 AM
To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Lowe, Carmel; Cottrell, Paul; Thornton, Sheila
Cc: Reid, Rebecca; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: Re: For URGENT APPROVAL : J50 - media lines and message to media

[redacted]

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Girouard, Louise
Sent: Thursday, August 9, 2018 7:21 AM
To: Thomson, Andrew; Davis, Neil; Lowe, Carmel; Cottrell, Paul; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: For URGENT APPROVAL : J50 - media lines and message to media

Good morning,

[redacted]

NOTE; Updated media lines are also attached for your information only.

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Loiuse

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Sent: Thursday, August 9, 2018 7:10 AM
To: Smith, Kathleen <Kathleen.Smith@dfo-mpo.gc.ca>; Northcott, Jennifer <Jennifer.Northcott@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
Cc: Morris, Christina <Christina.Morris@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.Mcelhone@dfo-mpo.gc.ca>; Wiebe, Robert <Robert.Wiebe@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Saindon, Carole <Carole.Saindon@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Hinds, Kimberly <Kimberly.Hinds@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>
Subject: For urgent review: J50 - media lines and message to media
Importance: High

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MESSAGE TO MEDIA (to be distributed to Pacific's media distribution list)

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s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Girouard, Louise
Sent: August-09-18 8:54 AM
To: Lowe, Carmel; Thomson, Andrew; Cottrell, Paul; Davis, Neil; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl; Jackson, Ashley
Subject: Re: For URGENT APPROVAL : J50 - media lines and message to media

Yes. Thank you Carmel.
L

From: Lowe, Carmel
Sent: Thursday, August 9, 2018 8:52 AM
To: Girouard, Louise; Thomson, Andrew; Cottrell, Paul; Davis, Neil; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl; Jackson, Ashley
Subject: RE: For URGENT APPROVAL : J50 - media lines and message to media

I understand Science approval is also required for these – is this correct? If so see below for some edits...

Carmel
Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

From: Girouard, Louise
Sent: August 9, 2018 8:01 AM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>
Cc: Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>; Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Jackson, Ashley <Ashley.Jackson@dfo-mpo.gc.ca>
Subject: RE: For URGENT APPROVAL : J50 - media lines and message to media

Andy – please see revision from NHQ for your approval. Thanks

[redacted]

-A

MESSAGE TO MEDIA (to be distributed to Pacific's media distribution list)

[redacted]

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

[redacted]

From: Thomson, Andrew
Sent: Thursday, August 9, 2018 7:32 AM
To: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>
Cc: Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>; Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Subject: Re: For URGENT APPROVAL : J50 - media lines and message to media

[redacted]

From: Cottrell, Paul
Sent: Thursday, August 9, 2018 7:25 AM
To: Girouard,

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

s.21(1)(a)

s.21(1)(b)

Louise;
Thomson,
Andrew;
Davis,
Neil;
Lowe,
Carmel;
Thornton,
Sheila
Cc: Reid,
Rebecca;
Antcliffe,
Bonnie;
Sloan,
Lara;
Bate, Dan;
Malikian,
Janine;
Webb,
Cheryl
Subject:
RE: For
URGENT
APPROVAL
: J50 -
media
lines and
message
to media

Hi Louis,

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Girouard, Louise
Sent: Thursday, August 09, 2018 7:21 AM
To: Thomson, Andrew; Davis, Neil; Lowe, Carmel; Cottrell, Paul; Thornton, Sheila

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s.21(1)(a)

s.21(1)(b)

Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
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Good morning,

[redacted]

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Loiuse

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Cc: Morris, Christina <Christina.Morris@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.Mcelhone@dfo-mpo.gc.ca>; Wiebe, Robert <Robert.Wiebe@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Saindon, Carole <Carole.Saindon@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Hinds, Kimberly <Kimberly.Hinds@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>
Subject: For urgent review: J50 - media lines and message to media
Importance: High

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MESSAGE TO MEDIA (to be distributed to Pacific's media distribution list)

[redacted]

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Khanna, Sukriti

From: Gilchrist, Brett
Sent: August-09-18 9:27 AM
To: Davis, Neil; Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Thomson, Andrew; Olson, Heather (DOJ); Burns, Adam
Subject: RE: Action Plan for J50

Will do.

From: Davis, Neil
Sent: August-09-18 12:26 PM
To: Gilchrist, Brett; Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Thomson, Andrew; Olson, Heather (DOJ); Burns, Adam
Subject: Re: Action Plan for J50

Brett et al

Can the relevant nhq folks join our srkw ops call at 930? Kendra is already on the invite, so can share w you. Then we can use that time slot to work through these licensing details

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Gilchrist, Brett
Sent: Thursday, August 9, 2018 9:15 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew; Olson, Heather (DOJ); Burns, Adam
Subject: RE: Action Plan for J50

Sorry, folks, please use this document attached noting we need to fill in the timelines for the issuance as well, as highlighted. [redacted]

The memo is attached for your use if you need it as well.

Brett

From: Gilchrist, Brett
Sent: August-09-18 11:59 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew; Olson, Heather (DOJ) (heather.olson@justice.gc.ca); Burns, Adam
Subject: RE: Action Plan for J50

[redacted]

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.
s.21(1)(a)
s.21(1)(b)

Let me know if you have any questions.

Brett
613-993-2055

From: Cottrell, Paul
Sent: August-09-18 11:33 AM
To: Gilchrist, Brett; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew
Subject: RE: Action Plan for J50

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Gilchrist, Brett
Sent: Thursday, August 09, 2018 8:29 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Brett

From: Cottrell, Paul
Sent: August-09-18 11:24 AM
To: Moore, Kendra; Harber, Lee

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s.21(1)(a)
s.21(1)(b)

Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Thanks,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Moore, Kendra
Sent: Thursday, August 09, 2018 8:17 AM
To: Harber, Lee; Cottrell, Paul
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

Hi Lee,

We will be using a section 38 authorization under the Marine Mammal Regulations, not a permit under SARA. We have drafted an authorization template for your region's review and will be sending it shortly. Based on Science's evaluation of NOAA's application, the approved activities must be included within the section 38 authorization.

Kendra

From: Harber, Lee
Sent: August-09-18 11:03 AM
To: Cottrell, Paul; Moore, Kendra
Subject: Fw: Action Plan for J50

FYI - science to complete application form and evaluate request.

Sent from my BlackBerry 10 smartphone on the Rogers network.

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Thursday, August 9, 2018 7:17 AM
To: Harber, Lee
Subject: FW: Action Plan for J50

From: Cottrell, Paul
Sent: Thursday, August 09, 2018 6:24 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50

Hi Teri,
Thank-you so much. Our DFO science folks will evaluate the proposal and resource management will work to draft a licence in anticipation of approval. I have attached a licence application which will need to be completed. Please complete asap so we can draft licence.
Thanks again,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Teri Rowles - NOAA Federal [redacted]
Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

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THANK YOU

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Sent: August-09-18 8:59 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew; Olson, Heather (DOJ); Burns, Adam
Subject: RE: Action Plan for J50
Attachments: MECTS-#3950132-v1-MECTS-#3950123-v1-MECTS-#3949785-v1-NOAA_SECTION_38_AUTHORIZATION_AUG_9_ho_comments.DOC

[redacted]

Let me know if you have any questions.

Brett
613-993-2055

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Sent: August-09-18 11:33 AM
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Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

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Subject: RE: Action Plan for J50

[redacted]

Thanks,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

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Vancouver, BC

V6C 3S4

(604) 666-9965

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To: Harber, Lee; Cottrell, Paul
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
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Subject: FW: Action Plan for J50

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Fisheries and Oceans Canada

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To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

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THANK YOU

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039, KILLER WHALE

AUTHORIZATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL

PURSUANT TO SECTION 38 OF THE *MARINE MAMMAL REGULATIONS*, SECTION 52 OF THE *FISHERY (GENERAL) REGULATIONS*, AND SECTION 74 OF THE *SPECIES AT RISK ACT*, THIS AUTHORIZATION IS HEREBY GIVEN TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL. THE AUTHORIZATION IS VALID ANYWHERE IN CANADIAN FISHERIES WATERS IN THE PACIFIC OCEAN WHERE FISHERIES AND OCEANS CANADA (DFO) ADMINISTERS THE AQUATIC RESOURCES AND OCEAN SPACE.

THE AUTHORIZATION IS VALID ONLY IN ACCORDANCE WITH THE FOLLOWING CONDITIONS SPECIFIED PURSUANT TO SUBSECTION 38(2) OF THE *MARINE MAMMAL REGULATIONS*:

1. THE OPERATIONS AUTHORIZED UNDER THIS AUTHORIZATION WILL INCLUDE THE FOLLOWING:
I) INTERACTING WITH A MARINE MAMMAL INCLUDING KILLER WHALES FOR THE PURPOSES OF **[specific description of the activity being authorized should be provided]**;
II) APPROACHING A KILLER WHALE WITH A VEHICLE WITHIN A DISTANCE OF LESS THAN 200 METRE DISTANCE;
III) DOCUMENTATION AND PHOTOGRAPHY OF MARINE MAMMALS;
IV) THE COLLECTION OF ANY BIOLOGICAL SAMPLES REQUESTED FROM FISHERIES AND OCEANS CANADA.

2. THE AUTHORIZED PERSONNEL FOR THE ABOVE OPERATIONS SHALL BE AS FOLLOWS:
DR. TERRI ROWLES, THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.
NAME OF INDIVIDUAL(S), NAME OF ORGANIZATION**[include all response team members]**

ACTIVITIES CARRIED OUT UNDER THE AUTHORITY OF THIS AUTHORIZATION SHALL ONLY BE CONDUCTED UNDER THE DIRECT SUPERVISION OF THE AUTHORIZATION HOLDER OR AUTHORIZED INDIVIDUALS AS LISTED ABOVE. THE AUTHORIZATION HOLDER IS RESPONSIBLE TO ENSURE THAT AN AUTHORIZED INDIVIDUAL IS PRESENT DURING ANY ACTIVITY AUTHORIZED UNDER THIS AUTHORIZATION.

3. THE RESPONSE ACTIVITY SHALL TAKE PLACE IN THE WATERS OF THE PACIFIC REGION THAT ARE PARTS OF AREAS UNDER THE ADMINISTRATION OF DFO;

4. THE FOLLOWING DFO REGIONAL STAFF SHALL BE ADVISED IMMEDIATELY ON COMMENCEMENT OF ANY OPERATIONS:
PACIFIC REGION: PAUL COTTRELL (604) 240-3841

5. AN INCIDENT REPORT SHALL BE MADE DETAILING SPECIES IDENTIFICATION, EFFORTS MADE TO SAVE THE ANIMAL, CONDITION OF THE ANIMAL AT THE COMMENCMENT AND AT THE END OF THE OPERATON, LOCATION (COORDINATES) OF THE OPERATION, NAMES OF ALL INVOLVED IN THE OPERATION, ANY OTHER OBSERVATIONS RELEVANT TO INCIDENT;

6. A QUARTERLEY REPORT INCLUDING LOCATIONS, SPECIES, NUMBERS AND OBSERVATIONS SHALL BE PROVIDED TO DFO PACIFIC REGION REGIONAL COORDINATOR:

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

PAUL COTTRELL, PAUL.COTTRELL@DFO-MPO.GC.CA

7. THAT A COPY OF THIS AUTHORIZATION SHALL BE CARRIED BY ALL PERSONNEL ENGAGED IN THE RESPONSE OPERATIONS. GOVERNMENT ISSUED IDENTIFICATION DOCUMENTS ARE REQUIRED FOR ANYONE ACTING UNDER THE AUTHORITY OF THIS AUTHORIZATION. THE AUTHORIZATION AND ANY PERSON WORKING UNDER ITS AUTHORITY MUST BE AVAILABLE FOR INSPECTION UPON REQUEST BY A FISHERY OFFICER OR FISHERY GUARDIAN;

8. THE AUTHORIZATION HOLDER MUST HAVE APPROPRIATE, CURRENT LIABILITY INSURANCE AND/OR APPROPRIATE, CURRENT WORKERS COMPENSATION COVERAGE IN PLACE THAT COVERS ACTIVITIES UNDERTAKEN IN ALL PROVINCES COVERED BY THIS AUTHORIZATION THROUGHOUT THE DURATION OF THE CONTRACT. COPIES OF THIS DOCUMENTATION MUST BE PROVIDED TO THE DFO IN ADVANCE OF COMMENCEMENT OF THE AUTHORIZED ACTIVITIES.

9. THE AUTHORIZATION HOLDER AGREES THAT IT IS FULLY LIABLE FOR ANY DAMAGES THAT IT CAUSES TO ANY THIRD PARTY IN CONNECTION WITH ACTIVITIES AUTHORIZED BY THE AUTHORIZATION, REGARDLESS OF WHETHER THE THIRD PARTY MAKES ITS CLAIM AGAINST CANADA OR THE AUTHORIZATION HOLDER. IF CANADA IS REQUIRED, AS A RESULT OF JOINT AND SEVERAL LIABILITY, TO PAY A THIRD PARTY IN RESPECT OF DAMAGES CAUSED BY THE AUTHORIZATION HOLDER, THE AUTHORIZATION HOLDER MUST REIMBURSE CANADA FOR THAT AMOUNT.

10. IF ACTIVITIES AUTHORIZED BY THIS AUTHORIZATION ARE CONDUCTED WHILE ON A DFO VESSEL, THE AUTHORIZATION HOLDER WILL ENSURE THAT PERSONS ENGAGED IN THIS ACTIVITY WEAR APPROPRIATE SAFETY EQUIPMENT DURING THE ENTIRE LENGTH OF THE ACTIVITY. SAFETY EQUIPMENT INCLUDES, BUT MAY NOT BE LIMITED TO, PERSONAL PROTECTION EQUIPMENT THAT MEETS CANADIAN SAFETY STANDARDS.

11. THIS AUTHORIZATION AND CONDITIONS CANCEL AND REPLACE ANY PREVIOUS AUTHORIZATION AND CONDITION ISSUED TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION FOR THE PURPOSE OF CONDUCTING RESPONSE OPERATIONS;

13. THIS AUTHORIZATION IS VALID FROM DATE OF ISSUANCE TO AUGUST 9, 2018;

14. THE ISSUANCE OF THIS AUTHORIZATION IMPLIES NO COMMITMENT BY THE MINISTER OR THE DEPARTMENT TO REISSUE THE AUTHORIZATION IN SUBSEQUENT YEARS.

NOTE: NOTHING IN THIS AUTHORIZATION SHALL BE CONSTRUED AS AUTHORITY UNDER THE *SPECIES AT RISK ACT* (SARA) TO KILL, HARM, HARASS, CAPTURE OR TAKE AN INDIVIDUAL OF A WILDLIFE SPECIES THAT IS LISTED AS "EXTIRPATED", "ENDANGERED" OR "THREATENED" AS IDENTIFIED IN SCHEDULE 1 OF SARA. IF THE ACTIVITY AUTHORIZED IN THIS AUTHORIZATION IS EXPECTED TO INTERACT WITH AN "EXTIRPATED", "ENDANGERED" OR "THREATENED" SPECIES, AN APPLICATION FOR A SECTION 73 SARA PERMIT CAN BE FOUND AT WWW.SARAREGISTRY.GC.CA AND SUBMITTED TO THE DFO SPECIES AT RISK MANAGEMENT DIVISION AT [redacted]@DFO-MPO.GC.CA. FOR MORE INFORMATION ON SARA, INCLUDING A LIST OF PROTECTED SPECIES, PHONE [redacted], VISIT WWW.SARAREGISTRY.GC.CA, OR CONTACT DFO SPECIES AT RISK MANAGEMENT DIVISION AT [redacted]@DFO-MPO.GC.CA OR [redacted].

s.21(1)(a) s.21(1)(b) s.23

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Khanna, Sukriti

From: Jenkins, Randy
Sent: August-09-18 8:49 AM
To: Cottrell, Paul; Gilchrist, Brett; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Davis, Neil; Thomson, Andrew
Subject: RE: Action Plan for J50

[redacted]

From: Cottrell, Paul
Sent: Thursday, August 9, 2018 11:33 AM
To: Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>; Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Cc: Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: RE: Action Plan for J50

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Gilchrist, Brett
Sent: Thursday, August 09, 2018 8:29 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

[redacted]

Brett

From: Cottrell, Paul
Sent: August-09-18 11:24 AM
To: Moore, Kendra; Harber, Lee
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Thanks,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Moore, Kendra
Sent: Thursday, August 09, 2018 8:17 AM
To: Harber, Lee; Cottrell, Paul
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

Hi Lee,

We will be using a section 38 authorization under the Marine Mammal Regulations, not a permit under SARA. We have drafted an authorization template for your region's review and will be sending it shortly. Based on Science's evaluation of NOAA's application, the approved activities must be included within the section 38 authorization.

Kendra

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Harber, Lee
Sent: August-09-18 11:03 AM
To: Cottrell, Paul; Moore, Kendra
Subject: Fw: Action Plan for J50

FYI - science to complete application form and evaluate request.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Thursday, August 9, 2018 7:17 AM
To: Harber, Lee
Subject: FW: Action Plan for J50

From: Cottrell, Paul
Sent: Thursday, August 09, 2018 6:24 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50

Hi Teri,
Thank-you so much. Our DFO science folks will evaluate the proposal and resource management will work to draft a licence in anticipation of approval. I have attached a licence application which will need to be completed. Please complete asap so we can draft licence.
Thanks again,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Teri Rowles - NOAA Federal [redacted]
Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

THANK YOU

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Khanna, Sukriti

From: Lowe, Carmel
Sent: August-09-18 8:31 AM
To: Cottrell, Paul
Cc: Kennedy, Eddy; Thornton, Sheila
Subject: Re: Action Plan for J50

Paul
Can you please send Terri's application?
Carmel

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Thursday, August 9, 2018 06:24
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50

Hi Teri,
Thank-you so much. Our DFO science folks will evaluate the proposal and resource management will work to draft a licence in anticipation of approval. I have attached a licence application which will need to be completed. Please complete asap so we can draft licence.
Thanks again,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Teri Rowles - NOAA Federa
Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

THANK YOU

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Khanna, Sukriti

From: Jenkins, Randy
Sent: August-09-18 9:28 AM
To: Davis, Neil; Gilchrist, Brett; Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Thomson, Andrew; Olson, Heather (DOJ); Burns, Adam
Subject: RE: Action Plan for J50

Brett and Paul will join Kendra

From: Davis, Neil
Sent: Thursday, August 9, 2018 12:26 PM
To: Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>; Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Cc: Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Olson, Heather (DOJ) <heather.olson@justice.gc.ca>; Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>
Subject: Re: Action Plan for J50

Brett et al

Can the relevant nhq folks join our srkw ops call at 930? Kendra is already on the invite, so can share w you. Then we can use that time slot to work through these licensing details

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Gilchrist, Brett
Sent: Thursday, August 9, 2018 9:15 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew; Olson, Heather (DOJ); Burns, Adam
Subject: RE: Action Plan for J50

Sorry, folks, please use this document attached noting we need to fill in the timelines for the issuance as well, as highlighted.

The memo is attached for your use if you need it as well.

Brett

From: Gilchrist, Brett
Sent: August-09-18 11:59 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew; Olson, Heather (DOJ) (heather.olson@justice.gc.ca); Burns, Adam
Subject: RE: Action Plan for J50

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[redacted]

Let me know if you have any questions.

Brett
613-993-2055

From: Cottrell, Paul
Sent: August-09-18 11:33 AM
To: Gilchrist, Brett; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew
Subject: RE: Action Plan for J50

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Gilchrist, Brett
Sent: Thursday, August 09, 2018 8:29 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Brett

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Cottrell, Paul
Sent: August-09-18 11:24 AM
To: Moore, Kendra; Harber, Lee
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Thanks,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Moore, Kendra
Sent: Thursday, August 09, 2018 8:17 AM
To: Harber, Lee; Cottrell, Paul
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

Hi Lee,

We will be using a section 38 authorization under the Marine Mammal Regulations, not a permit under SARA. We have drafted an authorization template for your region's review and will be sending it shortly. Based on Science's evaluation of NOAA's application, the approved activities must be included within the section 38 authorization.

Kendra

From: Harber, Lee
Sent: August-09-18 11:03 AM
To: Cottrell, Paul; Moore, Kendra
Subject: Fw: Action Plan for J50

FYI - science to complete application form and evaluate request.

s.19(1)

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Thursday, August 9, 2018 7:17 AM
To: Harber, Lee
Subject: FW: Action Plan for J50

From: Cottrell, Paul
Sent: Thursday, August 09, 2018 6:24 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50

Hi Teri,
Thank-you so much. Our DFO science folks will evaluate the proposal and resource management will work to draft a licence in anticipation of approval. I have attached a licence application which will need to be completed. Please complete asap so we can draft licence.
Thanks again,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Teri Rowles - NOAA Federal
Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

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Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

THANK YOU

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Khanna, Sukriti

From: Lowe, Carmel
Sent: August-09-18 4:07 PM
To: Kennedy, Eddy; Thomson, Andrew; Cottrell, Paul
Subject: FW: URGENT SRKW request

fyi

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7

Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

From: Higgins, Linda
Sent: August 9, 2018 3:22 PM
To: Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Cc: Ford, Leanne <Leanne.Ford@dfo-mpo.gc.ca>
Subject: Re: URGENT SRKW request

Fishery Officers have contacted Springtide Whale Watching and Eco Tours to stay back 500 m. It is spreading amongst the fleet.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Higgins, Linda
Sent: Thursday, August 9, 2018 2:55 PM
To: Lowe, Carmel
Cc: Ford, Leanne (Leanne.Ford@dfo-mpo.gc.ca)
Subject: RE: URGENT SRKW request

We have officers around Port Renfrew and we are trying to raise them on the radio and will divert if we can. In the meantime, we can contact whale watching companies to let them know to stay back. If you have information on those companies, please let me know.
Otherwise, it might be worthwhile for Paul to broadcast a radio message from on site, telling people to stay away.

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I will update you as I learn more.

Linda Higgins
South Coast Area Chief, Conservation and Protection
Fisheries and Oceans Canada/Government of Canada
Linda.Higgins@dfo-mpo.gc.ca Tel: 250 754-0221 / Cel: [redacted]
Chef Secteur de la côte sud, Conservation et Protection
Pêches et Océans Canada / Gouvernement du Canada
Linda.Higgins@dfo-mpo.gc.ca Tél: 250 754-0221 / Cel: [redacted]

"This electronic mail message is intended only for the use of the party (ies) to whom it is addressed. This message may contain information that is privileged, personal or confidential. Any use of the information by anyone other than the intended recipient(s) is prohibited. If you receive this message in error, please notify the sender immediately (250) 754-0221 and delete both the original message and all copies. Thank you.

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From: Lowe, Carmel
Sent: Thursday, August 9, 2018 2:34 PM
To: Higgins, Linda <Linda.Higgins@dfo-mpo.gc.ca>
Subject: FW: URGENT SRKW request

See below…. Do you have anyone off Sooke now?

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

From: Lowe, Carmel
Sent: August 9, 2018 2:28 PM
To: Carlson, Mike <Mike.Carlson@dfo-mpo.gc.ca>
Cc: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: URGENT SRKW request

Mike
J50 has been spotted off Sooke and US are enroute there to commence health assessment and potential mediation application. Our team has indicated that the US team should arrive on-site in approx. 10 mins – but they are also reporting that there are about 20 whale watching boat in vicinity of this and the other whales and in order to minimize disturbance are requesting C&P support to keep the WW boats away during the US operations – I think they are recommending buffer zone of 500m or so….

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Is this possible – please advise?

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

Pages 2187 to / à 2189

are not relevant

sont non pertinentes

s.16(2)

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Khanna, Sukriti

From: Cauffope, Genevieve
Sent: August-09-18 10:42 AM
To: Davis, Neil; Cottrell, Paul; Kennedy, Eddy
Cc: Gallant, Nicole; Thornton, Sheila; Harber, Lee
Subject: C&P on-water support for J50: August 9 and 10

Good morning,
If needed, here are the available C&P platforms that can provide support:

RHIB-Aug 9 only
The Victoria detachment currently has a RHIB around Port Renfrew today (Aug 9). If their support is needed, I can reach out via the Radio-room as they are out of cell range

PLANE-Aug 10 only
The PAL flight is not flying today but is flying South Coast tomorrow (Aug 10): I will be requesting an amendment to the tasking so that they can look for the whales tomorrow and take pictures.
The tasking requires location: I was going to say Around Port Renfrew southerly to the international border unless you can provide a better range.

MPP-Unavailable
The vessel is in Port Hardy and will be north island until the end of the month-unavailable.

Please let me know if you do require our support so that I can help coordinate
Thank you
Gen

Geneviève Cauffopé

Acting Senior Compliance Program Officer, Oceans Protection Plan, Conservation and Protection
Fisheries and Oceans Canada/ Government of Canada
Genevieve.Cauffope@dfo-mpo.gc.ca /**Tel: 604-666-0588**
Cell :
Agente principale de programme par intérim, plan de protection des océans, Conservation et Protection
Pêches et Océans Canada/ Gouvernement du Canada
Genevieve.Cauffope@dfo-mpo.gc.ca /**Tél.: 604-666-0588**
Cellulaire :

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 7:16 AM
To: Lowe, Carmel; Thornton, Sheila
Cc: Davis, Neil; Thomson, Andrew; Greene, Annely
Subject: FW: Action Plan for J50
Attachments: Science Evaluation Review Form.docx

Hi Sheila/Carmel,
Attached is the science evaluation review form for the NOAA proposal.
Cheers,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Cottrell, Paul
Sent: Thursday, August 09, 2018 6:24 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
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Thanks again,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

s.19(1)

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Fisheries and Oceans Canada

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Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
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THANK YOU

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Science Evaluation Form

Marine Mammal and Species at Risk Licences

Assess sections for both SARA and non-SARA species

Application No:	
Applicant Name:	
Project Title:	
SARA MM Species: **(Listed as Endangered or Threatened)**	
Other MM Species: **(includes SARA Species Listed as Special Concern)**	

Science Review:

a. Assessment of Anticipated Affect *(choose from i to iii below)*

i) ☐ The proposed activity is **not anticipated to affect**[i] the requested marine mammals. *(please explain rationale).*

(permit not required skip to (d))

ii) ☐ The information in the application is **inadequate** to assess if the proposed activity will affect[i] marine mammals. *(please explain or specify information required)*

(recommend permit denial skip to (d))

iii) ☐ The proposed activity **is anticipated to affect**[i] the requested marine mammal(s), **and**: *(please check purpose)*

- ☐ The activity is scientific research relating to the conservation of the species and conducted by qualified persons. *(proceed to (b))*
- ☐ The activity benefits the species or is required to enhance its chance of survival in the wild. *(proceed to (b))*
- ☐ Affecting the species is incidental to the carrying out of the activity *(proceed to (b))*

OR ☐ Licence request is for a SARA Species and does not comply with any of the allowable purposes set out in SARA 73(2) as outlined in the above three purposes.

(please explain then skip to (d) and recommend permit denial)

OR ☐ Licence request is for non-SARA Species and does not comply with any of the above purposes set out above.

(please skip to (d) and recommend licence denial ***or*** *explain why licence is recommended and proceed to (b)*

b. Assessment of Pre-Condition Requirements[ii]

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The proposed research *(assess for both SARA and Non-SARA species)*:

☐ Complies with the required pre-conditions[ii] set out in SARA S.73(3). *(if yes, proceed to section (c))*

☐ The proposed research could comply with the required pre-conditions[ii] set out in SARA S.73(3) subject to the following amendments/restrictions to the activity methodology. *(Explain and provide methodology amendments/restrictions)*

(if yes, proceed to (c))

☐ The proposed research does not comply with the required pre-conditions[ii] set out in SARA S.73(3). *(please explain)*

(complete section (c) then recommend permit denial in Section (d))

c. Recovery Strategy & Recovery Team Review

	Yes	No
Does this application include SARA listed Species? *(if no skip to (d))*	☐	☐
Is there a Recovery Strategy, Management Plan and/or Action Plan drafted for this species?	☐	☐
Is the proposed activity supported by the Strategy, Management or Action Plan? *(explain and/or identify section)*	☐	☐
Is there a Recovery Team for this species? *(if no skip to (d))*	☐	☐
If Yes, has the Recovery Team reviewed the Licence request? *(attach assessment)*	☐	☐

If **yes**, please outline whether the Recovery Team recommendation is similar or contrary to DFO Science opinion and explain basis if different.

If **no**, please explain.

d. Science Section Recommendation

I recommend that this request *(check appropriate recommendation)*:

☐ Does not require a licence for the reason(s) specified in (a)

☐ Is approved as requested

☐ Is approved subject to the amendments/restrictions outlined in (b)

☐ Is denied for the reasons specified in (a), (b), or (c)

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Science Program Head/Section Head signatures are required for SARA species listed as Special Concern and all other marine mammals).

Signature of Science Program Head: _____ **Date:** _____

Signature of Science Section Head: _____ **Date:** _____

Is the species being evaluated listed as <u>Endangered or Threatened</u> under SARA? If yes, Science Division Head signature is also required.

Signature of Science Division Head: _____ **Date:** _____

Endnotes

i Definitions of Affect (SARA and Non-SARA Listed Species)

For the purposes of assessing whether an activity may affect a listed marine mammal species under S73 of SARA or disturb a marine mammal under the Marine Mammal Regulations, an activity will be deemed to affect (disturb) the marine mammal if the activity does not comply with:

- S32(1) that states that "No person shall kill, harm, harass, capture or take an individual or a wildlife species that is listed as an extirpated species, and endangered species or a threatened species"; or,
- S33 that states that "No person shall damage or destroy the residence of one or more individual of a wildlife species that is listed as an endangered species or a threatened species, or that is listed as an extirpated species if a recovery strategy has recommended that reintroduction of the species into the wild in Canada
- the regionally posted marine mammal viewing guidelines.

ii **Preconditions for affecting or disturbing a marine mammal**

SARA establishes that certain preconditions be met to authorize "affecting" the species. For program consistency, these conditions will be considered for both SARA listed and non-SARA listed marine mammal species. The preconditions of SARA are:

S73(3) preconditions for the issuance of a S73 permit are:

(a) All reasonable alternatives to the activity that would reduce the impact on the species have been considered and the best solution has been adopted.

(b) All feasible measures will be taken to minimize the impact of the activity on the species or its critical habitat or the residences of individuals; and

(c) The activity will not jeopardize the survival or recovery of the species.

s.19(1)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 8:36 AM
To: Lowe, Carmel; Kennedy, Eddy; Thornton, Sheila
Cc: Davis, Neil; Thomson, Andrew
Subject: FW: Action Plan for J50
Attachments: DFO_Application J50.docx

Here you go!

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Teri Rowles - NOAA Federal
Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

THANK YOU

Pages 2197 to / à 2199
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pages 2097 to / à 2099

s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 7:28 AM
To: Girouard, Louise
Subject: FW: For URGENT APPROVAL : J50 - media lines and message to media

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Cottrell, Paul
Sent: Thursday, August 09, 2018 7:25 AM
To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Lowe, Carmel; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: RE: For URGENT APPROVAL : J50 - media lines and message to media

Hi Louis,

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

s.21(1)(a) s.21(1)(b)

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(604) 666-9965

From: Girouard, Louise
Sent: Thursday, August 09, 2018 7:21 AM
To: Thomson, Andrew; Davis, Neil; Lowe, Carmel; Cottrell, Paul; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: For URGENT APPROVAL : J50 - media lines and message to media

Good morning,

[redacted]

NOTE; Updated media lines are also attached for your information only.

Thanks,

Loiuse

From: Jackson, Ashley
Sent: Thursday, August 9, 2018 7:10 AM
To: Smith, Kathleen <Kathleen.Smith@dfo-mpo.gc.ca>; Northcott, Jennifer <Jennifer.Northcott@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
Cc: Morris, Christina <Christina.Morris@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.Mcelhone@dfo-mpo.gc.ca>; Wiebe, Robert <Robert.Wiebe@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Saindon, Carole <Carole.Saindon@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Hinds, Kimberly <Kimberly.Hinds@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>
Subject: For urgent review: J50 - media lines and message to media
Importance: High

As discussed -- we've prepared a message to media and have revised media lines. For urgent concurrent approvals. I will coordinate any changes here.

MESSAGE TO MEDIA (to be distributed to Pacific's media distribution list)

[redacted]

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Pages 2203 to / à 2207

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s.21(1)(a)
s.21(1)(b)
s.23

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UNCLASSIFIED

MEMORANDUM FOR THE REGIONAL DIRECTOR
RESOURCE MANAGEMENT

ISSUANCE OF AN ANTHORIZATION TO DISTURB MARINE MAMMALS TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

(FOR DECISION)

SUMMARY OF ADVICE TO MINISTER

[redacted]

s.21(1)(a)
s.21(1)(b)
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[redacted]

Paul Cottrell
Marine Mammal Coordinator
Resource Management

[redacted]

☐ I concur with the recommendations

☐ I do not concur with the recommendations

Andrew Thomson
Regional Director
Resource Management

Attachment(s): (#) *(if applicable)*

TAB 1 – Template of the authorization to be issued to NOAA

s.21(1)(a)
s.21(1)(b)
s.23

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 9:52 AM
To: Gilchrist, Brett; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew; Olson, Heather (DOJ); Burns, Adam
Subject: Re: Action Plan for J50

Thanks so much, this is great. You guys work fast!

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Gilchrist, Brett
Sent: Thursday, August 9, 2018 9:15 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew; Olson, Heather (DOJ); Burns, Adam
Subject: RE: Action Plan for J50

Sorry, folks, please use this document attached noting we need to fill in the timelines for the issuance as well, as highlighted.

The memo is attached for your use if you need it as well.

Brett

From: Gilchrist, Brett
Sent: August-09-18 11:59 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew; Olson, Heather (DOJ) (heather.olson@justice.gc.ca); Burns, Adam
Subject: RE: Action Plan for J50

Let me know if you have any questions.

Brett
613-993-2055

From: Cottrell, Paul
Sent: August-09-18 11:33 AM

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

To: Gilchrist, Brett; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew
Subject: RE: Action Plan for J50

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Gilchrist, Brett
Sent: Thursday, August 09, 2018 8:29 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Brett

From: Cottrell, Paul
Sent: August-09-18 11:24 AM
To: Moore, Kendra; Harber, Lee
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Thanks,
Paul

Paul Cottrell

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Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Moore, Kendra
Sent: Thursday, August 09, 2018 8:17 AM
To: Harber, Lee; Cottrell, Paul
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

Hi Lee,

We will be using a section 38 authorization under the Marine Mammal Regulations, not a permit under SARA. We have drafted an authorization template for your region's review and will be sending it shortly. Based on Science's evaluation of NOAA's application, the approved activities must be included within the section 38 authorization.

Kendra

From: Harber, Lee
Sent: August-09-18 11:03 AM
To: Cottrell, Paul; Moore, Kendra
Subject: Fw: Action Plan for J50

FYI - science to complete application form and evaluate request.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Thursday, August 9, 2018 7:17 AM
To: Harber, Lee
Subject: FW: Action Plan for J50

From: Cottrell, Paul
Sent: Thursday, August 09, 2018 6:24 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil;

s.19(1)

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Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50

Hi Teri,
Thank-you so much. Our DFO science folks will evaluate the proposal and resource management will work to draft a licence in anticipation of approval. I have attached a licence application which will need to be completed. Please complete asap so we can draft licence.
Thanks again,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Teri Rowles - NOAA Federal [redacted]
Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

THANK YOU

s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 8:38 AM
To: Davis, Neil; Thomson, Andrew
Cc: Harber, Lee
Subject: RE: Action Plan for J50

Sounds good. Let me know where to call.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Davis, Neil
Sent: Thursday, August 09, 2018 8:32 AM
To: Cottrell, Paul; Thomson, Andrew
Cc: Harber, Lee
Subject: RE: Action Plan for J50

[redacted]

From: Cottrell, Paul
Sent: Thursday, August 9, 2018 8:25 AM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: FW: Action Plan for J50

[redacted]

Paul Cottrell

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Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Cottrell, Paul
Sent: Thursday, August 09, 2018 8:23 AM
To: Moore, Kendra; Harber, Lee
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Thanks,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Moore, Kendra
Sent: Thursday, August 09, 2018 8:17 AM
To: Harber, Lee; Cottrell, Paul

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

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Kendra

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Sent: August-09-18 11:03 AM
To: Cottrell, Paul; Moore, Kendra
Subject: Fw: Action Plan for J50

FYI - science to complete application form and evaluate request.

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Sent: Thursday, August 9, 2018 7:17 AM
To: Harber, Lee
Subject: FW: Action Plan for J50

From: Cottrell, Paul
Sent: Thursday, August 09, 2018 6:24 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50

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Thanks again,
Paul

Paul Cottrell

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Fisheries and Oceans Canada

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Vancouver, BC

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s.19(1)

(604) 666-9965

From: Teri Rowles - NOAA Federal [redacted]
Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

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s.21(1)(a)
s.21(1)(b)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 8:35 AM
To: Davis, Neil; Thomson, Andrew
Cc: Harber, Lee
Subject: RE: Action Plan for J50

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Davis, Neil
Sent: Thursday, August 09, 2018 8:32 AM
To: Cottrell, Paul; Thomson, Andrew
Cc: Harber, Lee
Subject: RE: Action Plan for J50

[redacted]

From: Cottrell, Paul
Sent: Thursday, August 9, 2018 8:25 AM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: FW: Action Plan for J50

[redacted]

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Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Cottrell, Paul
Sent: Thursday, August 09, 2018 8:23 AM
To: Moore, Kendra; Harber, Lee
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Thanks,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information

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Sent: Thursday, August 09, 2018 8:17 AM
To: Harber, Lee; Cottrell, Paul
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

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Kendra

From: Harber, Lee
Sent: August-09-18 11:03 AM
To: Cottrell, Paul; Moore, Kendra
Subject: Fw: Action Plan for J50

FYI - science to complete application form and evaluate request.

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To: Harber, Lee
Subject: FW: Action Plan for J50

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Sent: Thursday, August 09, 2018 6:24 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
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Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

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V6C 3S4

(604) 666-9965

From: Teri Rowles - NOAA Federal [redacted]
Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

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THANK YOU

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 8:21 AM
To: Davis, Neil; Jenkins, Randy
Cc: Gilchrist, Brett; Harber, Lee
Subject: RE: Action Plan for J50

Thanks Randy

[redacted]

Best
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Davis, Neil
Sent: Thursday, August 09, 2018 8:13 AM
To: Jenkins, Randy
Cc: Gilchrist, Brett; Cottrell, Paul; Harber, Lee
Subject: RE: Action Plan for J50

Hi Randy

Paul has the expertise around licencing and can address your questions, [redacted]

From: Jenkins, Randy
Sent: Thursday, August 9, 2018 8:09 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>
Subject: RE: Action Plan for J50

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NEIL: [redacted]

[redacted] Brett and Kendra are contacting Lee.

From: Jenkins, Randy
Sent: Thursday, August 9, 2018 10:56 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>
Subject: RE: Action Plan for J50

[redacted]

Thanks.

From: Jenkins, Randy
Sent: Thursday, August 9, 2018 10:50 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>
Subject: RE: Action Plan for J50

Hi Neil,

[redacted]

Thanks.
Randy

From: Davis, Neil
Sent: Thursday, August 9, 2018 10:45 AM
To: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Subject: Fw: Action Plan for J50

As requested

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Wednesday, August 8, 2018 10:19 PM
To: Davis, Neil; Thomson, Andrew
Cc: Harber, Lee
Subject: Fw: Action Plan for J50

Hi Guys,

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information

Request from NOAA. We have a SARA/section 52 application on-line which proponents usually fill out. I am sending them a link.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Teri Rowles - NOAA Federal <[redacted]
Sent: Wednesday, August 8, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

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THANK YOU

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 8:09 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50

Hi Teri,
We are drafting a licence based on your proposal submitted yesterday. Please fill in the correct SARA application form which will be for our records.
Thanks so much,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Cottrell, Paul
Sent: Thursday, August 09, 2018 6:24 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50

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Thanks again,
Paul

Paul Cottrell

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s.19(1)

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Teri Rowles - NOAA Federal [redacted]
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Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

THANK YOU

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 6:24 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50
Attachments: MM- SARA LICENCE APPLICATION.docx

Hi Teri,
Thank-you so much. Our DFO science folks will evaluate the proposal and resource management will work to draft a licence in anticipation of approval. I have attached a licence application which will need to be completed. Please complete asap so we can draft licence.
Thanks again,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Teri Rowles -
Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

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THANK YOU

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Marine Mammal/SARA Licence Application Instructions

The Species at Risk Act (SARA) was proclaimed in June 2003, by the Government of Canada for the protection of species at risk. A licence is required under the authority of the Fisheries (General) Regulations, Marine Mammal Regulations and the Species at Risk Act. This application is to be completed for all research/projects affecting a marine mammal species which is listed as Extirpated, Endangered or Threatened under Canada's Species at Risk Act. Information about the Act, status and location of SARA-listed species can be obtained at the following website: http://www.sararegistry.gc.ca/default_e.cfm. Use this application if your research covers a variety of species that are both listed and non-listed under SARA.

For marine mammal species, including those listed as Special Concern under SARA, a Marine Mammal Licence Application is required and can be obtained from the Program Officer listed at the end of this document.

It is recommended that licence applications be submitted prior to **March 31st** each year and may be submitted pending dates and funding information is tentative. Applications received after **March 31st** will take additional time to process (i.e. up to 8 weeks) due to DFO operational limitations during the summer research period.

You need to apply for a Marine Mammal/SARA Licence when:

Contemplating an activity affecting a marine mammal that is listed as 'Extirpated', 'Endangered' or 'Threatened' on Schedule 1 of the SARA. Species listed as Special Concern are under the authority of the Fisheries (General) Regulations and the Marine Mammal Regulations and therefore require a Marine Mammal Licence.

What kind of activities may be authorized under SARA?

To be successful in your licence application, your activity must fall into one of the following categories under section 73(2) of SARA. The agreement may be entered into, or the licence issued, only if the Minister is of the opinion that:

a) The activity is scientific research relating to the conservation of the species and conducted by qualified persons;
b) The activity benefits the species or is required to enhance its chance of survival in the wild; or
c) Affecting the species is incidental to the carrying out of the activity.

Part I – Applicant Information:

An Animal Care Permit or equivalent is required for research activities with the potential to disturb marine mammals, particularly if permission to capture or conduct invasive sampling is requested. If you believe that you require an ACC authorization and are not affiliated with an academic institution, please contact the DFO Program Officer listed at the end of this document.

Part II – Study/Project Information

Please provide information regarding the logistics of the proposed research and be as accurate as possible. If a study proposal or work plan has been developed, please attach it to your application. Numbers below pertain to the corresponding licence application numbers.

1. Provide Project Title and an abstract (in 100 words or less) that summarizes the proposed research activity.
2. Identify the lead investigator as well as research assistants. Indicate if assistants will be working independently of lead investigator.
3. Indicate all marine mammal species that the research/project will target or potentially impact. Status and location of SARA-listed species can be obtained at the following website: http://www.sararegistry.gc.ca/default_e.cfm
4. Indicate the date and locations where the activity will occur. A listing of DFO Statistical Areas is available at the following website: http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/areas-secteurs/index-eng.html. A "blanket" licence for the entire BC coast will not be issued without a detailed project plan and sufficient justification. Multi-year permits will be issued for a maximum of 3 years for ongoing established research programs.
5. Attach a picture of the research vessel(s), aircraft or aerial drone that will be used and submit with your application. It is the responsibility of the applicant to obtain Foreign Vessel Clearance (FVC) www.state.gov/e/oes/ocns/opa/rvc when a non-Canadian vessel, aircraft or aerial drone, will be used for research purposes in Canadian waters. If you are trailering a US vessel for use in Canadian waters, a Customs Clearance number must be obtained at the Canadian border.

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6. 6(g): When marine mammals or marine mammal parts are to be transferred within British Columbia a Marine Mammal Transfer Licence is required. To transport across provincial or territorial boundaries, a Marine Mammal Transport Licence must be obtained. Please refer to the following website for information on which species require a Convention for the International Trade in Endangered Species (CITES) permit: http://www.cites.org/ to transport across an international boundary.
7. The "Be Whale Wise Guidelines - Marine Wildlife Guidelines for Boaters, Paddlers and Viewers (Revised 2011)" have been established to protect marine mammals from disturbance or harassment. Copies of the guidelines can be obtained online or from the Program Officer.
8. Self Explanatory
9. A detailed description of the project is necessary to assess potential impacts on the species of concern and other non targeted species. Please be specific as to the number, duration and distance of approach, restraints or sampling periods. If available, a work plan or proposal is useful in providing an assessment of the project. Attach field collection methods and techniques.

Part III – Impact and Mitigation Assessment

10. It is important to list all SARA-listed species and non-SARA listed species that may occur in the proposed research area and the anticipated harassments and/or mortalities for each.
11. Describe in detail anticipated or potential disturbances or mortalities to all species listed in Section 10 and include impacts on habitat(s) used by the species. List each species, the nature of harm, and rank the likelihood of harm or encounters (High, Medium, Low).
12. For information on Section 73(3) pre-conditions of SARA refer to: http://www.sararegistry.gc.ca/default_e.cfm. Pre-conditions (a) and (b) require that alternative measures such as area and/or time changes or changes to sampling gear or techniques must be considered and implemented if feasible before a licence can be issued. For pre-condition (c), please indicate (to the best of your knowledge) whether the proposed research activity, given (a) and (b), will jeopardize survival or recovery of the species. For the Minister of Fisheries and Oceans to be of the opinion that all of the pre-conditions laid out in Section 73(3) have been met, the onus is on the project proponent to do the following:
    - Be proactive in their research design,
    - Demonstrate awareness of the provisions of SARA, and
    - Demonstrate that measures are being taken to minimise harm to listed species, and that they have considered all alternatives to carrying out the activity.

Part IV – SARA Recovery Planning Evaluation

13. Copies of final Recovery Strategies, Action Plans and Management Plans are available on the SARA website: http://www.sararegistry.gc.ca/default_e.cfm. If recovery planning for the species under consideration has not been initiated, please indicate to the best of your ability how your proposed research/project supports species recovery.

Are other licences still required?

A Marine Mammal/SARA licence does not constitute an authorization to access property or supersede, cover or replace the need for other applicable authorizations which are the responsibility of the applicant., i.e. Foreign Vessel Clearance, National Wildlife Area research permits, Convention for the International Trade in Endangered Species (CITES) permits, Migratory Bird permits, additional Fisheries Act licences or Provincial permits under the BC Wildlife Act.

Submitting Your Application:

Please contact the undersigned if you have any questions and send your completed application via fax or email to:

Annely Greene
DFO Marine Mammal Program Officer
Fisheries & Oceans Canada – Pacific Region
401 Burrard Street, Vancouver, BC V6C 3S4

Phone: 604-666-0071 Email: Annely.Greene@dfo-mpo.gc.ca

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Marine Mammal/SARA Licence Application
Fisheries & Oceans Canada – Pacific Region

Please use **TAB key to move between fields for check boxes**

PART I - APPLICANT INFORMATION

Date:

Name:

Organization:

Street:

City:

Province/State:

Country: Postal Code/Zip:

Phone: Cellular: Fax:

Email:

Applicant Experience/Credentials: List relevant research programs, publications and/or attach CV.

Do you or your organization hold an Animal Care Committee Permit for this work? Yes ☐ No ☐

Attach copy to application - Permit # If no, explain why *(Refer to Part I – Applicant Information).*

List previous issued Marine Mammal/SARA licence numbers:

PART II - STUDY/PROJECT INFORMATION

1. **Project Title:**

   Project Abstract:

2. **Personnel:**

   Lead Investigator: _____

   Assistants:

3. **Species Information:**

   Species Studied:

4. **Dates & Location:**

   Study Period: From: To:

Are you requesting a multi-year licence? If yes, state reason for request below. Yes ☐ No ☐

(Refer to Part II, Item 3 of the Instructions)

Study Area/Location: _____

(For DFO Statistical areas refer to Part II, Item 4 of the instructions)

5. **Vessel/Aircraft/Aerial Drone Information:** Attach photograph of research vessel(s) with your application.

   Name(s): _____

   Registration #: _____

   Country of Registration: _____

If vessel, aircraft or aerial drone is registered outside of Canada, have you applied for Foreign Vessel Clearance? *(If no, please refer to Part II, Item 5 of the Instructions)* Yes ☐ No ☐

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Comment:

METHODOLOGY:

6.	Will animals be subjected to invasive sampling? Invasive sampling includes any methodology that involves capture and restraint of animals, direct or remote sampling of blood or tissues and the attachment of any apparatus to the marine mammal.	Yes	☐	No	☐
	a) If yes, how many samples will be taken?				
	a) Will live animals be collected?	Yes	☐	No	☐
	b) If yes, how many animals will be collected?				
	c) Will live animals be transported from one marine environment to another marine environment or holding facility?	Yes	☐	No	☐
	d) If yes, state location and rationale:				
	e) If yes to d) will animals be returned into the marine environment in the future?	Yes	☐	No	☐
	f) If yes, state location and rationale:				
	g) Will animals, specimens or samples be transported?	Yes	☐	No	☐
	i) Within British Columbia?	Yes	☐	No	☐
	ii) To another Province or Territory in Canada	Yes	☐	No	☐
	iii) Across an international boundary? *(Refer to Part II, Item 5 CITES in the Instructions)*	Yes	☐	No	☐
7.	Do you propose to be in contravention of regionally posted guidelines (Be Whale Wise Guidelines – for Boaters, Paddlers and Viewers) for any planned activity? If yes explain rationale. (*Refer to Part II, Item 7 of the Instructions)*	Yes	☐	No	☐
8.	Objective of Research/Project:				
9.	Explain field collections/study techniques. Attach project work plan/proposal if available.				

PART III – IMPACT ASSESSMENT

10.	SARA Species to be included in Permit:	Anticipated # of mortalities for each species:
	Non-SARA Species to be included in Permit:	Anticipated # of mortalities for each species:

11. Describe anticipated or potential disturbances to the identified species, other species and/or the habitat:

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12. Based on the pre-conditions in Section 73(3) of SARA, the proponent should specify:
(addressing a through c is mandatory for SARA species – see instructions)

a) What alternatives to the proposed method of conducting the activity have you considered? How is the chosen method the best solution to reduce impact to the species?

b) What mitigation measures have been included, and how do they minimize the potential impacts on listed species and/or habitats? What mitigation measures have been considered and not included, and for what reasons were they rejected?

c) Will the activities you plan to undertake jeopardize survival or recovery of the species, in light of measures in 12(a) and 12(b) above? If not, why not?

PART IV – SARA RECOVERY PLANNING EVALUATION

13. Has the proposed project/study been recommended in a SARA Recovery Strategy, Action Plan or Management plan? Please identify section.

14. Will the proposed project/study assist in the recovery of the species identified? Please explain.

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s.19(1)

Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 1:19 PM
To: Thornton, Sheila
Subject: RE: Action Plan for J50

Thanks Sheila,
NOAA has agreed to have one person dedicated to photographing and videoing all activities. They also have to report any adverse behaviour or impacts. Hopefully all is captured. [redacted] thanks for all your input on this!

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Thornton, Sheila
Sent: Thursday, August 09, 2018 12:51 PM
To: Cottrell, Paul
Subject: RE: Action Plan for J50

Hi Paul – photo ID of the injection site and indication of what should be looked for re: adverse reaction would be good to have.

S

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

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s.19(1)

From: Cottrell, Paul
Sent: August-09-18 8:36 AM
To: Lowe, Carmel; Kennedy, Eddy; Thornton, Sheila
Cc: Davis, Neil; Thomson, Andrew
Subject: FW: Action Plan for J50

Here you go!

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Teri Rowles - NOAA Federal [redacted]
Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

THANK YOU

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s.21(1)(a) s.21(1)(b)

Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 8:04 AM
To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Lowe, Carmel; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl; Jackson, Ashley
Subject: RE: For URGENT APPROVAL : J50 - media lines and message to media

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Girouard, Louise
Sent: Thursday, August 09, 2018 8:01 AM
To: Thomson, Andrew; Cottrell, Paul; Davis, Neil; Lowe, Carmel; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl; Jackson, Ashley
Subject: RE: For URGENT APPROVAL : J50 - media lines and message to media

Andy – please see revision from NHQ for your approval. Thanks

[redacted]

-A

MESSAGE TO MEDIA (to be distributed to Pacific's media distribution list)

[redacted]

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[redacted]

From: Thomson, Andrew
Sent: Thursday, August 9, 2018 7:32 AM
To: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>
Cc: Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>; Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Subject: Re: For URGENT APPROVAL : J50 - media lines and message to media

[redacted]

From: Cottrell, Paul
Sent: Thursday, August 9, 2018 7:25 AM
To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Lowe, Carmel; Thornton, Sheila

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s.21(1)(a)

s.21(1)(b)

Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl

Subject: RE: For URGENT APPROVAL : J50 - media lines and message to media

Hi Louis,

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Girouard, Louise
Sent: Thursday, August 09, 2018 7:21 AM
To: Thomson, Andrew; Davis, Neil; Lowe, Carmel; Cottrell, Paul; Thornton, Sheila
Cc: Reid, Rebecca; Antcliffe, Bonnie; Sloan, Lara; Bate, Dan; Malikian, Janine; Webb, Cheryl
Subject: For URGENT APPROVAL : J50 - media lines and message to media

Good morning,

MinO has requested that we issue a statement to the media prior to the NOAA media briefing at 10 am. Please review and approve the statement below which is going through approvals concurrently in NHQ.

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s.21(1)(a)

s.21(1)(b) NOTE; Updated media lines are also attached for your information only.

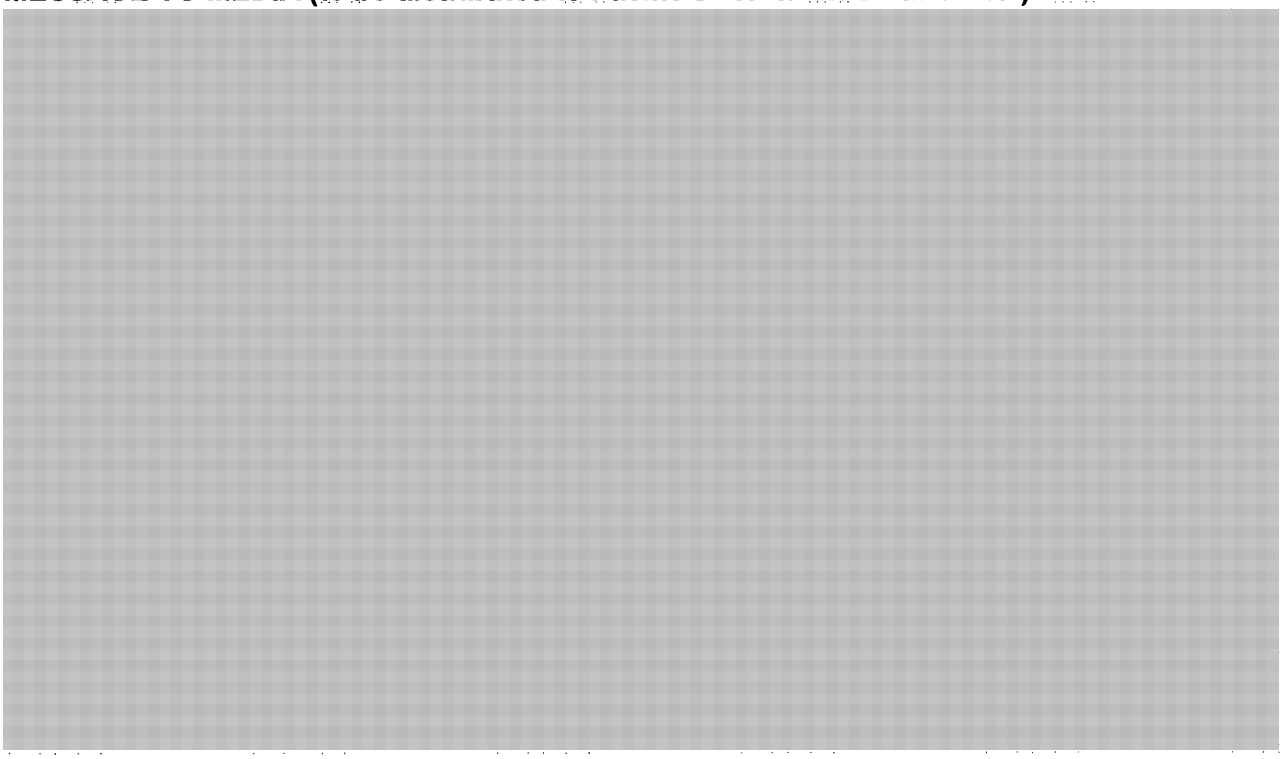
Thanks,

Loiuse

From: Jackson, Ashley
Sent: Thursday, August 9, 2018 7:10 AM
To: Smith, Kathleen <Kathleen.Smith@dfo-mpo.gc.ca>; Northcott, Jennifer <Jennifer.Northcott@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
Cc: Morris, Christina <Christina.Morris@dfo-mpo.gc.ca>; McElhone, Kathryn <Kathryn.Mcelhone@dfo-mpo.gc.ca>; Wiebe, Robert <Robert.Wiebe@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Saindon, Carole <Carole.Saindon@dfo-mpo.gc.ca>; Geraldes, Betty <Betty.Geraldes@dfo-mpo.gc.ca>; Hinds, Kimberly <Kimberly.Hinds@dfo-mpo.gc.ca>; Malikian, Janine <Janine.Malikian@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>
Subject: For urgent review: J50 - media lines and message to media
Importance: High

As discussed -- we've prepared a message to media and have revised media lines. For urgent concurrent approvals. I will coordinate any changes here.

MESSAGE TO MEDIA (to be distributed to Pacific's media distribution list)



s.19(1)
s.21(1)(a)
s.21(1)(b)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 7:29 AM
To: Parker, Todd
Subject: RE: Is J50 still with us?

Please confirm if you can, this would have to have happened last night as J50 was sighted yesterday afternoon by our DFO researchers.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Parker, Todd
Sent: Thursday, August 09, 2018 7:27 AM
To: Cottrell, Paul
Subject: RE: Is J50 still with us?

[redacted]

T

From: Cottrell, Paul
Sent: August-09-18 7:20 AM
To: Parker, Todd
Subject: RE: Is J50 still with us?

I have not heard that. Where/when/who did you get the info from?

Paul Cottrell

Pacific Marine Mammal Coordinator

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s.16(2)
s.21(1)(a)
s.21(1)(b)

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Parker, Todd
Sent: Thursday, August 09, 2018 7:19 AM
To: Cottrell, Paul
Subject: Is J50 still with us?

[redacted]

Todd Parker
DFO Fishery Officer - Marine Intelligence Officer/Agent des Peches - Officier du renseignement maritime
Joint Task Force (Pacific)/Groupe de travail commun (Pacific)
Marine Security Operations Centre - West/Centres d'Opérations de Sûrete Marine - Ouest
PO Box 17000 Stn Forces/PO Box 17000 Succ Forces
Victoria, BC
V9A 7N2
Ph./Téléphone (250) 363-7175 Cell Ph. [redacted]
Fax/Télécopieur (250) 363-2338
Government of Canada | Gouvernement du Canada |
E-Mail / Courrier électronique: Todd.Parker@dfo-mpo.gc.ca

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s.16(2)
s.19(1)
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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-09-18 4:22 PM
To: Ludlow, Mandy; Higgins, Linda
Cc: Adams, Gordon; Blacklock, Cam; Bromwich, Jordan; Cormie, Mya; Jansen, Willi; Matthews, Whitney; Norton, David; Osselton, Roy
Subject: Re: URGENT SRKW request

Thanks Linda,
I wasn't able to get to Sooke today on the boat as I was working on getting the license issued. Great that that the fleet sent out a request. Hope all worked out.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Ludlow, Mandy
Sent: Thursday, August 9, 2018 3:08 PM
To: Higgins, Linda
Cc: Cottrell, Paul; Adams, Gordon; Blacklock, Cam; Bromwich, Jordan; Cormie, Mya; Jansen, Willi; Matthews, Whitney; Norton, David; Osselton, Roy
Subject: RE: URGENT SRKW request

Mya spoke with [redacted] from Springtide whale Watching and Eco Tours. He has contacted his fleet to direct them to stay 500 meters from J-Pod. They are also spreading the word amongst the fleet. As this is not in law, it is not enforceable, we are appealing to their good nature.

J-pod is currently travelling in two groups, and J-50 is lagging behind, they will stay back 500 meters from wherever J 50 is, but if the rest of the pod is separated they will view from 200m. As [redacted] ndicated, "this is a tall order".

This is the best we can do unless it is enforceable.

From: Higgins, Linda
Sent: Thursday, August 9, 2018 2:35 PM
To: Ludlow, Mandy <Mandy.Ludlow@dfo-mpo.gc.ca>
Subject: FW: URGENT SRKW request
Importance: High

Please read below and provide me your response asap.

Linda Higgins
South Coast Area Chief, Conservation and Protection
Fisheries and Oceans Canada/Government of Canada
Linda.Higgins@dfo-mpo.gc.ca Tel: 250 754-0221 / Cel: [redacted]
Chef Secteur de la côte sud, Conservation et Protection
Pêches et Océans Canada / Gouvernement du Canada
Linda.Higgins@dfo-mpo.gc.ca Tél: 250 754-0221 / Cel: [redacted]

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From: Lowe, Carmel
Sent: Thursday, August 9, 2018 2:34 PM
To: Higgins, Linda <Linda.Higgins@dfo-mpo.gc.ca>
Subject: FW: URGENT SRKW request

See below.... Do you have anyone off Sooke now?

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

From: Lowe, Carmel
Sent: August 9, 2018 2:28 PM
To: Carlson, Mike <Mike.Carlson@dfo-mpo.gc.ca>
Cc: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: URGENT SRKW request

Mike
J50 has been spotted off Sooke and US are enroute there to commence health assessment and potential mediation application. Our team has indicated that the US team should arrive on-site in approx. 10 mins – but they are also reporting that there are about 20 whale watching boat in vicinity of this and the other whales and in order to minimize disturbance are requesting C&P support to keep the WW boats away during the US operations – I think they are recommending buffer zone of 500m or so....

Is this possible – please advise?

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

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Khanna, Sukriti

From: Harber, Lee
Sent: August-09-18 1:50 PM
To: Thomson, Andrew; Burns, Adam; Jenkins, Randy; Davis, Neil; Scott, Paul G; Moore, Kendra; Gilchrist, Brett; Cottrell, Paul
Subject: NOAA media briefing SRKW - Aug. 9
Attachments: NOAA Media Briefing - Aug 9.docx

Here is a rough summary of the questions posed by reporters and the panel responses from this morning's media briefing. I thought it might be better to capture the session this way to give a sense of where the interest is.

Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

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NOAA Media Briefing SRKW (J50 / J35) – Aug. 9 10-10:45AM

Andrew Thomson, RD FM, Pacific region, DFO
Sheila Thornton, lead KW research scientist, DFO
Paul Cottrell, Marine Mammal Coordinator, DFO
Brad Hanson, Wildlife Biologist, NOAA Fisheries
Dawn Noren, Research Fish Biologist, NOAA Fisheries

Webpage:
www.westcoast.fisheries.noaa.gov

Opening updates:

Andrew Thomson – received permit from NOAA for both sampling and antibiotic treatment, under Canadian Waters, science advice, do not want to delay any application, will be approved this morning

Sheila Thornton – J50 and J16 spotted this week, latest yesterday at 1:30PM, researches made observations from a distance, whales resting, foggy conditions, standard socializing behaviour,

Brad Hanson – Working out of Friday harbour, not uncommon for SRKW to split time between locations, Jpod currently 80 miles off of coast, foggy conditions, teams ready to go, hopping the whales will move back closer to coast.

Questions from reporters & panel responses:

1. **J35 was seen yesterday, how is she looking? 16 days carrying dead calf, record breaking display – updates?**
   - Sheila: yes spotted yesterday with carcass of calf, however focus has been on migratory rates of J50. There continue to be concerns of J35 behaviour and her decreased in ability to forage.

2. **Forecast / opportunities for treatment?**
   - Brad: some type of weather system coming in over weekend – should return to normal early Sunday / next week.
   - Need to be very cautiously when approaching J50, staff have a 6m long fibreglass pole, will need to try and match speed/direction of whales, try not to cause undue disturbance to the whales while taking samples or administering a treatment.

3. **Sense of the numbers and resources in working on this operation?**
   - Sheila: DFO vessel out of Sooke, 1 vessel out of Port Renfrew, straitwatch crew are helping, FM Paul Cottrell.
   - Brad: several NOAA staff, whale sanctuary, several veterinarians over past week to provide advice.

4. **J35, any discussion on taking away the calf to help her health, why is she doing this? Is this normal? J50 medicated feed option?**
   - Removing the calf would be a very difficult decision, would need to be very carefully considered

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- Duration of carrying calf is unprecedented, some species do this as form of mourning, this type of behaviour has been observed before.
- Medicated feed option not being considered at this time.

5. **Once you spot the orcas, what are the challenges to assess and treat J50?**
   - Brad: weather conditions create tracking challenges and ability to determine behavioural state of animals e.g. resting, foraging, each can be several hours, very brief opportunities to approach and treat the whale. Have to be in very close proximity, especially for a juvenile.

6. **J35, any intervention plans being considered? Last location of J50 and direction they are heading?**
   - Brad : No options being considered at this time. Very concerned and monitoring situation. Have seen this before. Challenging and not best interest for animal. Substantial connection with this calf, removal could negatively impact Jpod.
   - Last spotted off coast of swiftsure bank in Canadian waters and might be moving into US waters.

7. **J35 behaviour / health, sense of how she is doing?**
   - Still carrying calf when seen, but not closely observed as efforts were prioritized to J50.
   - Dawn Noren : fatigue, reduced foraging, help from family members

8. **Has intervention / medically treating SRKW ever been done before? Was it successful? Would we consider putting J50 in captivity to help her recover?**
   - This something new, some experience with NRKW, but never with SRKW.
   - Removing J50 from marine environment would need to very careful consider the impacts of this option as this cause significant disruption to the family.

9. **Timeline, would the treatment be able to be completed in 1 day or multi-day? Ability to sample, analyze and treat on boat?**
   - Brad: could be done in 1 day but depending on conditions could take several days. Not routine to make close approaches. Depends on behaviour of animals e.g. travelling, foraging, socializing.
   - General antibiotic to treat a broad range of health issues, and this will be available on the vessels.

10. **J50, any signs that she is worse off? Seen today? direction?**
    - Resting when observed yesterday. Difficult to assess during these conditions, some evidence that condition has been deteriorating over past few observations.
    - Jpod has been observed today, seems to be heading inland.
    - Energetics, how long could J35 push calf before time for concern. Can fast for 4 weeks until some detrimental effects. J35 may have extra lipid due to pregnancy, can go for longer without feeding.

Page 2247

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Pages 2248 to / à 2341

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sont des duplicatas des

pages 1549 to / à 1642

Pages 2342 to / à 2343
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

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s.23

s.69(1)(g) re: (a)

Dozie, Juachi

From: Heather Brekke <Heather.Brekke@dfo-mpo.gc.ca>
Sent: August-09-18 3:58 PM
To: Brekke, Heather; Davis, Neil
Subject: SRKW [redacted]

Heather Brekke 3:50 PM:

Hi Neil - the attached document for the [redacted] tomorrow does not have any of our suggested edits we sent last week, fyi

Davis, Neil 3:57 PM:

[redacted]

s.21(1)(a)
s.21(1)(b)
s.23
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Mbarushimana, Jenny

From: Gilchrist, Brett
Sent: August-09-18 9:16 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew; Olson, Heather (DOJ); Burns, Adam
Subject: RE: Action Plan for J50
Attachments: MECTS-#3950132-v1-MECTS-#3950123-v1-MECTS-#3949785-v1-NOAA_SECTION_38_AUTHORIZATION_AUG_9_ho_comments.DOC; MECTS-#3950156-v1-J50-Memo-RD_e.DOCX

Importance: High

Sorry, folks, please use this document attached noting we need to fill in the timelines for the issuance as well, as highlighted.

The memo is attached for your use if you need it as well.

Brett

From: Gilchrist, Brett
Sent: August-09-18 11:59 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew; Olson, Heather (DOJ) (heather.olson@justice.gc.ca); Burns, Adam
Subject: RE: Action Plan for J50

Let me know if you have any questions.

Brett
613-993-2055

From: Cottrell, Paul
Sent: August-09-18 11:33 AM
To: Gilchrist, Brett; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy; Davis, Neil; Thomson, Andrew
Subject: RE: Action Plan for J50

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[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Gilchrist, Brett
Sent: Thursday, August 09, 2018 8:29 AM
To: Cottrell, Paul; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Brett

From: Cottrell, Paul
Sent: August-09-18 11:24 AM
To: Moore, Kendra; Harber, Lee
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Thanks,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

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200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Moore, Kendra
Sent: Thursday, August 09, 2018 8:17 AM
To: Harber, Lee; Cottrell, Paul
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

Hi Lee,

We will be using a section 38 authorization under the Marine Mammal Regulations, not a permit under SARA. We have drafted an authorization template for your region's review and will be sending it shortly. Based on Science's evaluation of NOAA's application, the approved activities must be included within the section 38 authorization.

Kendra

From: Harber, Lee
Sent: August-09-18 11:03 AM
To: Cottrell, Paul; Moore, Kendra
Subject: Fw: Action Plan for J50

FYI - science to complete application form and evaluate request.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Thursday, August 9, 2018 7:17 AM
To: Harber, Lee
Subject: FW: Action Plan for J50

From: Cottrell, Paul
Sent: Thursday, August 09, 2018 6:24 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50

Hi Teri,

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Thank-you so much. Our DFO science folks will evaluate the proposal and resource management will work to draft a licence in anticipation of approval. I have attached a licence application which will need to be completed. Please complete asap so we can draft licence.
Thanks again,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Teri Rowles - NOAA Federal
Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

THANK YOU

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039, KILLER WHALE

AUTHORIZATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL

PURSUANT TO SECTION 38 OF THE *MARINE MAMMAL REGULATIONS*, SECTION 52 OF THE *FISHERY (GENERAL) REGULATIONS*, AND SECTION 74 OF THE *SPECIES AT RISK ACT*, THIS AUTHORIZATION IS HEREBY GIVEN TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL. THE AUTHORIZATION IS VALID ANYWHERE IN CANADIAN FISHERIES WATERS IN THE PACIFIC OCEAN WHERE FISHERIES AND OCEANS CANADA (DFO) ADMINISTERS THE AQUATIC RESOURCES AND OCEAN SPACE.

THE AUTHORIZATION IS VALID ONLY IN ACCORDANCE WITH THE FOLLOWING CONDITIONS SPECIFIED PURSUANT TO SUBSECTION 38(2) OF THE *MARINE MAMMAL REGULATIONS*:

1. THE OPERATIONS AUTHORIZED UNDER THIS AUTHORIZATION WILL INCLUDE THE FOLLOWING:
I) INTERACTING WITH A MARINE MAMMAL INCLUDING KILLER WHALES FOR THE PURPOSES OF [specific description of the activity being authorized should be provided],
II) APPROACHING A KILLER WHALE WITH A VEHICLE WITHIN A DISTANCE OF LESS THAN 200 METRE DISTANCE;
III) DOCUMENTATION AND PHOTOGRAPHY OF MARINE MAMMALS;
IV) THE COLLECTION OF ANY BIOLOGICAL SAMPLES REQUESTED FROM FISHERIES AND OCEANS CANADA.

2. THE AUTHORIZED PERSONNEL FOR THE ABOVE OPERATIONS SHALL BE AS FOLLOWS:
DR. TERRI ROWLES, THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.
NAME OF INDIVIDUAL(S), NAME OF ORGANIZATION[include all response team members]

ACTIVITIES CARRIED OUT UNDER THE AUTHORITY OF THIS AUTHORIZATION SHALL ONLY BE CONDUCTED UNDER THE DIRECT SUPERVISION OF THE AUTHORIZATION HOLDER OR AUTHORIZED INDIVIDUALS AS LISTED ABOVE. THE AUTHORIZATION HOLDER IS RESPONSIBLE TO ENSURE THAT AN AUTHORIZED INDIVIDUAL IS PRESENT DURING ANY ACTIVITY AUTHORIZED UNDER THIS AUTHORIZATION.

3. THE RESPONSE ACTIVITY SHALL TAKE PLACE IN THE WATERS OF THE PACIFIC REGION THAT ARE PARTS OF AREAS UNDER THE ADMINISTRATION OF DFO;

4. THE FOLLOWING DFO REGIONAL STAFF SHALL BE ADVISED IMMEDIATELY ON COMMENCEMENT OF ANY OPERATIONS:
PACIFIC REGION: PAUL COTTRELL (604) 240-3841

5. AN INCIDENT REPORT SHALL BE MADE DETAILING SPECIES IDENTIFICATION, EFFORTS MADE TO SAVE THE ANIMAL, CONDITION OF THE ANIMAL AT THE COMMENCMENT AND AT THE END OF THE OPERATON, LOCATION (COORDINATES) OF THE OPERATION, NAMES OF ALL INVOLVED IN THE OPERATION, ANY OTHER OBSERVATIONS RELEVANT TO INCIDENT;

6. A QUARTERLEY REPORT INCLUDING LOCATIONS, SPECIES, NUMBERS AND OBSERVATIONS SHALL BE PROVIDED TO DFO PACIFIC REGION REGIONAL COORDINATOR:

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PAUL COTTRELL, PAUL.COTTRELL@DFO-MPO.GC.CA

7. THAT A COPY OF THIS AUTHORIZATION SHALL BE CARRIED BY ALL PERSONNEL ENGAGED IN THE RESPONSE OPERATIONS. GOVERNMENT ISSUED IDENTIFICATION DOCUMENTS ARE REQUIRED FOR ANYONE ACTING UNDER THE AUTHORITY OF THIS AUTHORIZATION. THE AUTHORIZATION AND ANY PERSON WORKING UNDER ITS AUTHORITY MUST BE AVAILABLE FOR INSPECTION UPON REQUEST BY A FISHERY OFFICER OR FISHERY GUARDIAN;

8. THE AUTHORIZATION HOLDER MUST HAVE APPROPRIATE, CURRENT LIABILITY INSURANCE AND/OR APPROPRIATE, CURRENT WORKERS COMPENSATION COVERAGE IN PLACE THAT COVERS ACTIVITIES UNDERTAKEN IN ALL PROVINCES COVERED BY THIS AUTHORIZATION THROUGHOUT THE DURATION OF THE CONTRACT. COPIES OF THIS DOCUMENTATION MUST BE PROVIDED TO THE DFO IN ADVANCE OF COMMENCEMENT OF THE AUTHORIZED ACTIVITIES.

9. THE AUTHORIZATION HOLDER AGREES THAT IT IS FULLY LIABLE FOR ANY DAMAGES THAT IT CAUSES TO ANY THIRD PARTY IN CONNECTION WITH ACTIVITIES AUTHORIZED BY THE AUTHORIZATION, REGARDLESS OF WHETHER THE THIRD PARTY MAKES ITS CLAIM AGAINST CANADA OR THE AUTHORIZATION HOLDER. IF CANADA IS REQUIRED, AS A RESULT OF JOINT AND SEVERAL LIABILITY, TO PAY A THIRD PARTY IN RESPECT OF DAMAGES CAUSED BY THE AUTHORIZATION HOLDER, THE AUTHORIZATION HOLDER MUST REIMBURSE CANADA FOR THAT AMOUNT.

10. IF ACTIVITIES AUTHORIZED BY THIS AUTHORIZATION ARE CONDUCTED WHILE ON A DFO VESSEL, THE AUTHORIZATION HOLDER WILL ENSURE THAT PERSONS ENGAGED IN THIS ACTIVITY WEAR APPROPRIATE SAFETY EQUIPMENT DURING THE ENTIRE LENGTH OF THE ACTIVITY. SAFETY EQUIPMENT INCLUDES, BUT MAY NOT BE LIMITED TO, PERSONAL PROTECTION EQUIPMENT THAT MEETS CANADIAN SAFETY STANDARDS.

11. THIS AUTHORIZATION AND CONDITIONS CANCEL AND REPLACE ANY PREVIOUS AUTHORIZATION AND CONDITION ISSUED TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION FOR THE PURPOSE OF CONDUCTING RESPONSE OPERATIONS;

13. THIS AUTHORIZATION IS VALID FROM DATE OF ISSUANCE TO AUGUST 9, 2018;

14. THE ISSUANCE OF THIS AUTHORIZATION IMPLIES NO COMMITMENT BY THE MINISTER OR THE DEPARTMENT TO REISSUE THE AUTHORIZATION IN SUBSEQUENT YEARS.

s.21(1)(a)
s.21(1)(b)
s.23

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UNCLASSIFIED

MEMORANDUM FOR THE REGIONAL DIRECTOR
RESOURCE MANAGEMENT

ISSUANCE OF AN ANTHORIZATION TO DISTURB MARINE MAMMALS TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

(FOR DECISION)

SUMMARY OF ADVICE TO MINISTER

[redacted]

s.21(1)(a)
s.21(1)(b)
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RECOMMENDATION AND NEXT STEPS

[redacted]

Lee Harber
Marine Mammal Advisor
Resource Management

(Signature block below is for decision only)(Please remove before printing)

☐ I concur with the recommendations

☐ I do not concur with the recommendations

Andrew Thomson
Regional Director
Resource Management

Attachment(s): (#) *(if applicable)*

TAB 1 – Template of the authorization to be issued to NOAA

s.21(1)(a)

s.21(1)(b)

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Mbarushimana, Jenny

From: Jenkins, Randy
Sent: August-09-18 8:49 AM
To: Cottrell, Paul; Gilchrist, Brett; Moore, Kendra; Harber, Lee
Cc: Scott, Paul G; Davis, Neil; Thomson, Andrew
Subject: RE: Action Plan for J50

[redacted]

From: Cottrell, Paul
Sent: Thursday, August 9, 2018 11:33 AM
To: Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>; Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Cc: Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: RE: Action Plan for J50

[redacted]

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

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[redacted]

Brett

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Sent: August-09-18 11:24 AM
To: Moore, Kendra; Harber, Lee
Cc: Gilchrist, Brett; Scott, Paul G; Jenkins, Randy
Subject: RE: Action Plan for J50

[redacted]

Thanks,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

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(604) 666-9965

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Thanks again,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

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Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
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Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

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Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50

Hi Teri,
We are drafting a licence based on your proposal submitted yesterday. Please fill in the correct SARA application form which will be for our records.
Thanks so much,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

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Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
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Thanks again,
Paul

Paul Cottrell

s.19(1)

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Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

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Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

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THANK YOU

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

s.19(1)

s.21(1)(a)

s.21(1)(b)

Mbarushimana, Jenny

From: Jones, Lisa Ann
Sent: August-10-18 12:08 PM
To: Brekke, Heather
Subject: RE: Final Proposed amended RS for RKW
Attachments: 2018Proposed_RKW_aRS_Aug10_Pac_FINAL.docx

Hi Heather -

OK – here you go!

Realized the version you had used to make the CH text changes did not have the Table numbering change included from Scott. I have gone through and corrected this in this version.

Cheers
Lisa

From: Jones, Lisa Ann
Sent: August-10-18 11:32 AM
To: Brekke, Heather
Subject: RE: Final Proposed amended RS for RKW

Heather,

Here is the doc with the other minor changes added in and the email to send to Corina.

Can you also send to Scott and Jessica Young as he left her in charge for today

==========

Hi Corina,

Based on dialogue with Scott, a few minor changes were necessary to the aRS and a sentence on the MMRs also needed to be updated.

[redacted]

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

[redacted]

From: Brekke, Heather
Sent: August-10-18 11:01 AM
To: Jones, Lisa Ann
Subject: FW: Final Proposed amended RS for RKW

fyi

From: Brekke, Heather
Sent: August-09-18 3:56 PM
To: Busby, Corina
Cc: Stewart, Julie; Davis, Neil; McMillan, Christie
Subject: Final Proposed amended RS for RKW

Hi Corina,

I have made the required changes to the amended Recovery Strategy for Resident Killer Whale in Canada, as discussed.

[redacted]

We have submitted this for an updated French translation and will provide this as soon as we receive it.

Please let me know if you have any questions or concerns.

Best,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Brekke, Heather
Sent: August-10-18 12:25 PM
To: Busby, Corina
Cc: Stewart, Julie; Davis, Neil; McMillan, Christie; Chiu, Scott; Young, Jessica
Subject: RE: Final Proposed amended RS for RKW
Attachments: 2018Proposed_RKW_aRS_Aug10_Pac_FINALV.docx

Hi Corina,

Lisa Jones and Scott Chiu have been coordinating a few other final minor edits to the document that I wasn't privy to yesterday. To ensure we are all working off the same final version, I have attached a final document that has all the changes to the CH section (that I sent yesterday) as well as the minor revisions Scott and Lisa were finalizing, which are summarized below.

We will send the French translation of the document on Monday.

Best
Heather

From: Brekke, Heather
Sent: August-09-18 3:56 PM
To: Busby, Corina
Cc: Stewart, Julie; Davis, Neil; McMillan, Christie
Subject: Final Proposed amended RS for RKW

Hi Corina,

I have made the required changes to the amended Recovery Strategy for Resident Killer Whale in Canada, as discussed. Please see attached final (clean) proposed version from the Pacific region. I have also attached a one-pager of the final

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[redacted]

We have submitted this for an updated French translation and will provide this as soon as we receive it.

Please let me know if you have any questions or concerns.

Best,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

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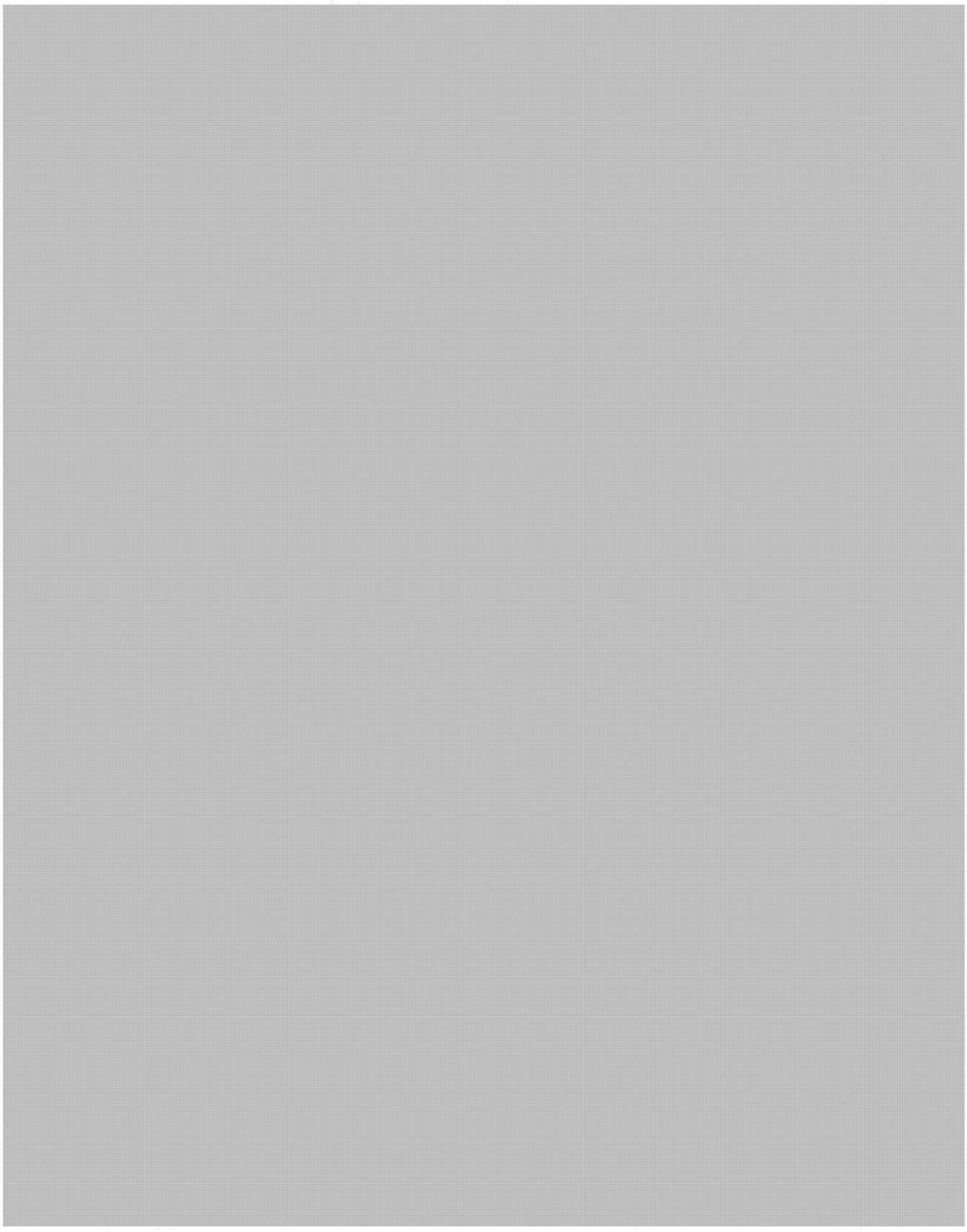
s.21(1)(a)

s.21(1)(b)

DRAFT CONSULTATION PLAN
60-day posting to the SAR Public Registry of the Proposed Amended Recovery Strategy for the Resident Killer Whale



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s.21(1)(a)

s.21(1)(b)

DRAFT CONSULTATION PLAN
60-day posting to the SAR Public Registry of the Proposed Amended Recovery Strategy for the Resident Killer Whale

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Wilkinson, Davida

From: Jones, Lisa Ann
Sent: August-10-18 12:23 PM
To: Brekke, Heather
Subject: use this one just to be sure
Attachments: 2018Proposed_RKW_aRS_Aug10_Pac_FINALV.docx

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

Pages 2366 to / à 2459

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pages 1549 to / à 1642

s.19(1)

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Wilkinson, Davida

From: [redacted]
Sent: August-10-18 7:54 AM
To: Brekke, Heather; Shaikh, Sharlene; Jones, Lisa Ann; Castro, Arcelia
Subject: Translation request - DFO180809-49
Attachments: 2018 Proposed Amended RS for Resident Killer Whales-FR.DOCX

Hello,

Please find attached the translation.

Regards,

[redacted]
10 Dawson, Moncton, NB, E1A 6C8
Lionbridge Canada
[redacted]
Lionbridge
CANADA

NOTE for emails used for quotation purposes: Unless otherwise agreed to in writing by Lionbridge, all services provided by Lionbridge and any purchase order issued are governed by Lionbridge's standard terms and conditions of sale (which are available at www.lionbridge.com/termsandconditions). Conflicting or additional terms on any purchase order or other customer document shall not apply unless agreed to in writing and signed by both parties.

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Pages 2461 to / à 2564

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21(1)(b), 21(1)(a)

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de la Loi sur l'accès à l'information

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s.19(1)

s.21(1)(a)

s.21(1)(b)

Dozie, Juachi

From: Brekke, Heather
Sent: August-10-18 4:06 PM
To: Shaikh, Sharlene
Subject: RE: On the West Coast FOR REVIEW

[redacted]

From: Shaikh, Sharlene
Sent: August-10-18 3:49 PM
To: Brekke, Heather
Subject: RE: On the West Coast FOR REVIEW

Dear [redacted]

[redacted]

Kind regards,

From: [redacted]
Sent: August-05-18 3:46 PM
To: NCR SARA / LEP RCN (DFO/MPO)
Subject: On the West Coast

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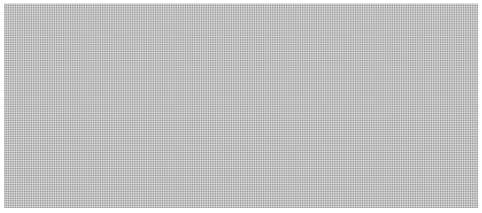
You can add the same main threats that hinder the recovery of the blue whale on the East Coast to Orcas on the West Coast.

On Species at Risk website: *"The main threats to its recovery are anthropogenic noise, lack of food availability, contaminants, collisions, disturbances..."*

Add also consideration that the orcas are losing salmon as a food source. Nothing has been seriously done with fish farms and contaminants/viruses. With the increase of tankers and bitumen, collisions and contaminants, disturbances have a direct effect.

But also the investment in a pipeline increases carbon output and global warming even though the Ministers involved acknowledge global climate change. Why don't they do something constructive to mitigate the carbon problem? Why not alternative energy sources instead of fossil fuels? The logic of the Federal Government has no logical answers to rely on other than "ledger sheets and promise of jobs." The same can be gotten from green energy sources and alleviate the carbon problem also.

From the North Shore where Wilkinson and Beech are representatives knowing full well the problems at hand but supporting the nonsensical party line.



s.21(1)(a)

s.21(1)(b)

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Dozie, Juachi

From: Brekke, Heather
Sent: August-10-18 11:00 AM
To: Jones, Lisa Ann
Subject: FW: Final Proposed amended RS for RKW
Attachments: 2018Proposed_RKW_aRS_Aug9_Pac_FINAL.docx; Edits_RKW aRS_Aug9_FINAL.docx

fyi

From: Brekke, Heather
Sent: August-09-18 3:56 PM
To: Busby, Corina
Cc: Stewart, Julie; Davis, Neil; McMillan, Christie
Subject: Final Proposed amended RS for RKW

Hi Corina,

I have made the required changes to the amended Recovery Strategy for Resident Killer Whale in Canada, as discussed.

[redacted]

We have submitted this for an updated French translation and will provide this as soon as we receive it.

Please let me know if you have any questions or concerns.

Best,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

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pages 1549 to / à 1642

Pages 2662 to / à 2663
are duplicates of
sont des duplicatas des
pages 2342 to / à 2343

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-10-18 9:43 AM
To: Cottrell, Paul
Cc: Scott, Paul G; Davis, Neil; Thomson, Andrew; Girouard, Louise; Lowe, Carmel
Subject: RE: J50 Update

Great, thanks so much for this update Paul. Much appreciated. Regarding the antibiotic injection, do you know if this was done via pole or remotely?

I will include this info, as well as the updates from the media briefing at 10am in the next update note for mino this afternoon. I will ensure to send it to you (although I know you're in the field) and Lee for review beforehand though.

Thanks again,

Kendra

From: Cottrell, Paul
Sent: August-10-18 12:34 PM
To: Moore, Kendra
Cc: Scott, Paul G; Davis, Neil; Thomson, Andrew; Girouard, Louise; Lowe, Carmel
Subject: RE: J50 Update

Hi Kendra,

As an update, J50 was spotted in Canadian waters off Sooke yesterday afternoon and assessed by the research team, Dr Brad Hansen (NOAA) and Dr Marty Haulina (Vancouver Aquarium). We (DFO) issued an authorization for research activities yesterday (health assessment-breath and fecal collection, antibiotic delivery by pole or dart) just in the nick of time.

Here is what was achieved:
1. 6 hours on the water with J50 starting in Canada off Sooke and ending at San Juan Islands US waters
2. A comprehensive veterinary assessment of J50 by Dr. Marty Haulena (Vancouver Aquarium)
3. Breath sample collection
4. Antibiotic injection
5. Collection of fish scales from predation event by her immediate pod
6. Photo, video, and UAS documentation of J50 and the response efforts

J50 was reported to be very active and while she was by herself (not unusual for her behavior) when she was first encountered she joined up with her pod quickly and stayed with them for the remainder of the day. She could keep up with her pod easily, took deep dives, and was not struggling to get to the surface. The team did not see her eat but others in her group were actively

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feeding and prey sharing was noted. They did note of her small size and how remarkable her emaciation was.

Future goals today if J50 located:
1. Collection of a fecal sample
2. Additional observations of her behavior, condition, and predation events
3. Live fish trials may begin as early as Friday in the US

Future goals if we observe J35:
1. Documentation of her behavior, overall condition, and pod dynamic

Other goals:
1. Schedule a veterinary call to discuss the health assessment (NOAA & DFO)
2. Send the breath sample for analysis

I'll keep you posted.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Moore, Kendra
Sent: Friday, August 10, 2018 6:35 AM
To: Harber, Lee; Cottrell, Paul
Cc: Scott, Paul G
Subject: J50 Update Note

Good morning Lee and Paul,

Mino is seeking an update this morning and after the media briefing this afternoon EDT regarding J50/J35.

Attached is an Issue Note for your review as most of the key information is from a NOAA tweet from yesterday.

If you could send me any comments or include additional information that would be great.

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Thanks so much!

Kendra

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Khanna, Sukriti

From: Sloan, Lara
Sent: August-10-18 2:37 PM
To: Cottrell, Paul
Subject: RE: J50 Update

Good luck : /

From: Cottrell, Paul
Sent: August-10-18 2:36 PM
To: Sloan, Lara
Subject: Re: J50 Update

We would wait until J-pod is gone. The calf is almost certainly positively buoyant.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Sloan, Lara
Sent: Friday, August 10, 2018 2:32 PM
To: Cottrell, Paul
Subject: RE: J50 Update

Wow. Do you think if that happens J-pod will see you take the calf?

From: Cottrell, Paul
Sent: August-10-18 2:23 PM
To: Sloan, Lara
Subject: Re: J50 Update

I don't have a kit on the boat. We are hoping J35 drops her calf today and we can then collect. It is windy so likely no sampling today.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Sloan, Lara
Sent: Friday, August 10, 2018 1:44 PM
To: Cottrell, Paul
Subject: RE: J50 Update

Do you have your pooper scooper ready?

From: Cottrell, Paul
Sent: August-10-18 1:02 PM
To: Thomson, Andrew
Cc: Sloan, Lara; Davis, Neil
Subject: RE: J50 Update

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Hi Andy,
J-pod just went through Active Pass and heading towards Sandheads/Fraser River. I'm on water with CP monitoring. Will update you if anything comes up. I will be working with CP on the water this weekend as well. We will have 2 rhibs (CP and RM MM rescue vessel) on the water and strait watch for the weekend.
best,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

s.21(1)(a)
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Khanna, Sukriti

From: Moore, Kendra
Sent: August-10-18 9:11 AM
To: Harber, Lee; Cottrell, Paul
Cc: Scott, Paul G
Subject: RE: J50 Update Note

Great, thanks Lee. I look forward to hearing how and what is said during the media briefing.

Kendra

From: Harber, Lee
Sent: August-10-18 11:54 AM
To: Moore, Kendra; Cottrell, Paul
Cc: Scott, Paul G
Subject: RE: J50 Update Note

Hi Kendra,

I am reviewing the update note and no substantive changes from me, however we will need to connect with Paul C to confirm the NOAA tweet and latest. I will calling into the media briefing again this morning at 10.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: (613) 797-5146

From: Moore, Kendra
Sent: 2018–August-10 6:35 AM
To: Harber, Lee; Cottrell, Paul
Cc: Scott, Paul G
Subject: J50 Update Note

Good morning Lee and Paul,

Mino is seeking an update this morning and after the media briefing this afternoon EDT regarding J50/J35.

Attached is an Issue Note for your review as most of the key information is from a NOAA tweet from yesterday.

If you could send me any comments or include additional information that would be great.

Thanks so much!

Kendra

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Khanna, Sukriti

From: Candice Emmons - NOAA Federal [redacted]
Sent: August-10-18 9:05 AM
To: Thornton, Sheila
Cc: Stephen AGRI:EX Raverty; Frances Gulland; Cottrell, Paul; Marty Haulena; Nollens, Hendrik; John Durban - NOAA Federal; Kristin Wilkinson - NOAA Federal; Joe Gaydos; brad hanson; Mike Ford; Lynne Barre; Ken Balcomb; Linda Rhodes; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; Jim McBain; Michael moore
Subject: Re: Lateral images of J50 - June, July, August

We have added a few additional photos from 09Aug2018. We were fortunate to have good lighting, so we included different angles.
-Candi

On Sat, Aug 4, 2018 at 8:19 AM, Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca> wrote:

Apologies – right side, clearly visible in DSC_0615 high res photo in the folder.

Sheila J. Thornton, Ph.D

Research Scientist, Ecosystem Sciences Division (ESD), Science Branch

Fisheries and Oceans Canada / Government of Canada

Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences

Pêches et Océans Canada / Gouvernement du Canada

Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Thornton, Sheila
Sent: August-04-18 8:14 AM
To: Stephen AGRI:EX Raverty; Frances Gulland; Cottrell, Paul; Marty Haulena; Nollens, Hendrik
Cc: John Durban - NOAA Federal; Kristin Wilkinson - NOAA Federal; Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Linda Rhodes; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; 'Jim McBain'; Frances Gulland; Michael moore
Subject: Lateral images of J50 - June, July, August

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Hello all,

I have uploaded some lateral images of J50 from June 24, July 9th, and August 3rd. I am not seeing the blowhole lesion as clearly as others; however, there is a scar/lesion on her left side directly below her dorsal fin just cranial to the saddle patch that may be of interest – please see the attached comparative photos from June to August, and some high resolution photos on the google drive.

Kind regards,

Sheila

Sheila J. Thornton, Ph.D

Research Scientist, Ecosystem Sciences Division (ESD), Science Branch

Fisheries and Oceans Canada / Government of Canada

Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences

Pêches et Océans Canada / Gouvernement du Canada

Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Jim McBain [mailto
Sent: August-03-18 7:28 P
To: Nollens, Hendrik
Cc: John Durban - NOAA Federal; Stephen AGRI:EX Raverty; Kristin Wilkinson - NOAA Federal; Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Linda Rhodes; Thornton, Sheila; Cottrell, Paul; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael moore
Subject: Re: [EXTERNAL] Aerial images J50

Hi Hendrik,

I mentioned Erysipelothrix primarily to be sure that any therapeutic effort would include a drug that is effective for that bug. The reality is that there are other bacteria and some fungi that could produce lesions like that. The one interesting characteristic of her disease is that it hasn't killed her yet. That leads me to suspect that the

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organism(s) involved aren't potent systemic toxin producers. Lots of guessing and lots of opportunity to be wrong.

Jim

On Fri, Aug 3, 2018, 7:00 PM Nollens, Hendrik [redacted] wrote:

Thank you, Jim. Infarction is listed as a differential diagnosis in the approved permit, but I did not call out erysipelas specifically. Let me know if there are other things you'd like me to add? We still have some edits and updates to add to the permit, so I can easily add.

-Hendrik.

[redacted]

On Aug 3, 2018, at 3:37 PM, Jim McBain <[redacted] wrote:

Hi All,

Someone may have already said this; I haven't been able to go through all of the email yet. The lesions that appear to be present on the August photo of J50 look like infarction lesions. The lesion near the blowhole looks similar to the apparent lesions affecting the flukes. I've seen flukes that look much like those in the photo in some stranded (and captive) Tursiops. The outcome if the animal survives is often loss of some part of or all of the fluke blades. The possibility of giving J50 antibiotics seems remote but could be life saving. I would be surprised if J50 has any appetite remaining so food may not be an effective route for administration of medication. If there is any possibility of administering antibiotics, I would include Erysipelothrix in my list of possible organisms.

Jim

On Thu, Aug 2, 2018 at 8:49 AM, John Durban - NOAA Federal [redacted] wrote:

Yes - I think so. We have other images that will show this, and we will get more.

- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program

NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037

s.19(1)

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Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

On Aug 2, 2018, at 8:15 AM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

Hendrik and John

Is there some discoloration or opacity of the dorsal surfaces of the flukes as well?

S

From: Nollens, Hendrik [mailto
Sent: Thursday, August 2, 2018 8:03 AM
To: John Durban - NOAA Federal; Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Raverty, Stephen AGRI:EX; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: RE: [EXTERNAL] Aerial images J50

I'll let other vets weight in, but the white patch is likely a yeast plaque. *Candida* spp or similar. Yeast overgrowth of the upper respiratory tract may explain the bad breath that has been noted, although the bad breath can be a side effect from inappetence as well. If a yeast plaque is present around the blowhole, the yeast has likely also invaded the upper respiratory tract (nares, paranasal diverticula) and probably the lower respiratory tract (bronchi, lungs). We don't typically think of a yeast as a primary cause of illness, but it is a clear sign of how compromised J50 is. She probably also has pneumonia and is in my opinion not likely survive without help.

From: John Durban - NOAA Federal [mailto
Sent: Thursday, August 02, 2018 8:01 AM
To: Nollens, Hendrik; Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Stephen AGRI:EX

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Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; [redacted] Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: RE: [EXTERNAL] Aerial images J50

It is real.

On August 2, 2018 7:34:33 AM "Nollens, Hendrik" [redacted] wrote:

> Hi John,
>
> Thank you for sharing. This confirms what Ken said in his last email; not good. Is the white patch behind her blowhole an artifact or is it real?
>
> --HN.

From: John Durban - NOAA Federal [mailto:[redacted]
Sent: Thursday, August 02, 2018 7:14 AM
To: Kristin Wilkinson - NOAA Federal
Cc: Joe Gaydos; brad hanson; Mike Ford; Candi Emmons; Lynne Barre; Ken Balcomb; Nollens, Hendrik; Stephen AGRI:EX Raverty; Linda Rhodes; Sheila Thornton; Paul Cottrell; Holly Fearnbach; Lance Barrett-Lennard; Lisa Ballance; Marty Haulena; Betsy Lutmerding; Deborah Fauquier; [redacted] Teri Rowles; Lesanna Lahner; Frances Gulland; Michael Moore
Subject: [EXTERNAL] Aerial images J50

Dear Colleagues,

Images from SR3 and NOAA, not for distribution

Note that I have copied Michael, Lessana and Frances - additional vets that we have been engaging in discussions of SRKW condition

Holly and I managed to obtain some aerial images of some J and L pod whales yesterday, including the J16s. It was very challenging wind and glare conditions, but nonetheless we wanted to share some first aerial images of J50's body condition. Attached here is an image that compares her vertical photograph with one taken in May 2017, when she was at her

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previously worst measure of body condition (see email below for a plot and description of body condition measures).

As you can see, the aerial comparison is concerning. In addition to a clear "peanut head", J50 has lost condition along the body axis (note particularly around the dorsal fin). I would also note that she was not in robust condition compared to others in her cohort in 2017, so the baseline image here isn't good condition.

We have been a bit rushed since getting in late last night so my apologies we didn't find our best shot from 2017 for comparison, but I think the difference is clear. We aim to get clearer images of her current condition, and other SRKWs, in the next few days and will provide updated image comparisons and quantitative measurements. When we get some time (likely this afternoon) Holly will update the plot below with condition measures for all the J16s.

We hope to be on the call today, but it depends on what we find on there boat.

Best Wishes, John

<image001.jpg>

- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program

NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037

Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

Begin forwarded message:

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From: John Durban - NOAA Federal [redacted]

Subject: Re: Thursday 8AM call to discuss concerns about J50's nutritional condition

Date: July 25, 2018 at 10:15:31 AM PDT

To: Joe Gaydos [redacted]

Cc: brad hanson [redacted] Mike Ford [redacted], Candi Emmons [redacted], Lynne Barre [redacted], Ken Balcomb [redacted], Hendrik Nollens [redacted] "Stephen AGRI:EX Raverty" [redacted] Linda Rhodes [redacted] Sheila Thornton <Sheila.Thornton@dfo-mpo.gc.ca>, Paul Cottrell <Paul.Cottrell@dfo-mpo.gc.ca>, Holly Fearnbach [redacted], Lance Barrett-Lennard [redacted] Lisa Ballance [redacted]

Please note I am copying Holly and Lance here - my collaborators on body condition measures from recent UAS-based aerial photogrammetry.

Attached is a plot of our Eye Patch Ratio (EPR; Fearnbach et al. unpublished data) for each of the members of the J16 matriline over repeated photogrammetry measurements from September 2015, May 2016, September 2016, May 2017 and September 2017. Our ongoing data analyses indicate this EPR measure is our most sensitive measure of body condition (basically fatness behind the head), which gives us the greatest power (lowest CV in repeat measurements) to detect differences over time. Vertical error bars are SD of repeat measurements in each sampling period. Horizontal lines link the same individual over time.

The BLACK line is J50. You will see that she was in significantly poorer condition in each of our last two sampling periods in 2017.

Note that the very low measure in September 2017 was J52, another calf of the same cohort, that died within weeks of our sampling, We hope we don't see J50 measuring to be this emaciated when we begin sampling in early September, and hope she is still around then.

Please note, these data are unpublished, but are provided to facilitate our discussion tomorrow. <u>Please do not use or distribute without permission.</u>

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Thanks, John

<image002.jpg>

- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program

NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037

Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

--

Candice K. Emmons
Research Fisheries Biologist
NOAA/NMFS Northwest Fisheries Science Center
2725 Montlake Blvd East, Seattle, WA 98112
Office: 206 302 2432

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Khanna, Sukriti

From: Girouard, Louise
Sent: August-10-18 5:34 PM
To: Webb, Cheryl; Davis, Neil; Cottrell, Paul; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Kennedy, Eddy; Higgins, Linda
Subject: RE: SRKW weekend planning

Thanks Neil,

FYI – NOAA will not be holding a media teleconference over the weekend unless there is a major development.

I will keep this groups apprised but as it stands next call will be on Monday.

L

From: Webb, Cheryl
Sent: Friday, August 10, 2018 5:09 PM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>; Kennedy, Eddy <Eddy.Kennedy@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>; Higgins, Linda <Linda.Higgins@dfo-mpo.gc.ca>
Subject: Re: SRKW weekend planning

That sounds good to me...I am around

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Davis, Neil
Sent: Friday, August 10, 2018 3:23 PM
To: Cottrell, Paul; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise; Higgins, Linda
Subject: SRKW weekend planning

Hi all,

Wanted to get a quick update to ensure we are prepared for any events relating to J35 or J50 over the weekend.

I had a chat w Paul C and it sounds like we have a C&P vessel out of Victoria and the MM Response vessel over the weekend, one or both of which can be tasked to support monitoring and sample collection over the weekend if the whales are in Cdn waters. Straitwatch will also be on the water and able to share information. The focus is on collecting a fecal sample. Also had a chat w Carmel and it sounds like Science is assessing options for continued on water presence. I'll let Carmel provide any more info on that once Science is in a position to do so. My suggestion is that if there are updates or there are any kinds of decisions that need to be made, that we share that info with this group. Between us, I suspect we'll have someone close enough to a blackberry to determine what next steps or further information sharing needs to occur. Any other thoughts welcome.

Thx
Neil

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Khanna, Sukriti

From: Higgins, Linda
Sent: August-10-18 5:08 PM
To: Cottrell, Paul
Cc: Green, Sherri; Demsky, Arthur
Subject: Re: SRKW weekend planning

It's okay. I was speaking with Andy about this afternoon and we won't be attending. We will continue with any regular patrol plans.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Friday, August 10, 2018 3:58 PM
To: Higgins, Linda; Davis, Neil; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise
Cc: Ludlow, Mandy
Subject: Re: SRKW weekend planning

So it was Steveston CP detachment, not Victoria. Sorry for the confusion.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Friday, August 10, 2018 3:42 PM
To: Higgins, Linda; Davis, Neil; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise
Cc: Ludlow, Mandy
Subject: Re: SRKW weekend planning

Hi Linda,
I was talking with Art. The animals were off Sandheads, so there is plans that they will be on the water tomorrow. It all depends on where the whales are.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Higgins, Linda
Sent: Friday, August 10, 2018 3:31 PM
To: Davis, Neil; Cottrell, Paul; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise
Cc: Ludlow, Mandy
Subject: Re: SRKW weekend planning

C and P isn't planning on being out Saturday or Sunday.

Sent from my BlackBerry 10 smartphone on the Rogers network.

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From: Davis, Neil
Sent: Friday, August 10, 2018 3:23 PM
To: Cottrell, Paul; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise; Higgins, Linda
Subject: SRKW weekend planning

Hi all,

Wanted to get a quick update to ensure we are prepared for any events relating to J35 or J50 over the weekend.

I had a chat w Paul C and it sounds like we have a C&P vessel out of Victoria and the MM Response vessel over the weekend, one or both of which can be tasked to support monitoring and sample collection over the weekend if the whales are in Cdn waters. Straitwatch will also be on the water and able to share information. The focus is on collecting a fecal sample. Also had a chat w Carmel and it sounds like Science is assessing options for continued on water presence. I'll let Carmel provide any more info on that once Science is in a position to do so. My suggestion is that if there are updates or there are any kinds of decisions that need to be made, that we share that info with this group. Between us, I suspect we'll have someone close enough to a blackberry to determine what next steps or further information sharing needs to occur. Any other thoughts welcome.

Thx
Neil

s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Davis, Neil
Sent: August-10-18 1:14 PM
To: Sloan, Lara; Cottrell, Paul; Thornton, Sheila
Cc: Bate, Dan
Subject: RE: URGENT - quick update to the media lines

A couple comments - [redacted] I've drafted something but suggest that Science review. Sheila is in the field but Eddy Kennedy could possibly review instead.

From: Sloan, Lara
Sent: Friday, August 10, 2018 12:25 PM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>
Cc: Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>
Subject: URGENT - quick update to the media lines
Importance: High

Hi. Are you all ok with these updates?

Media Lines

[redacted]

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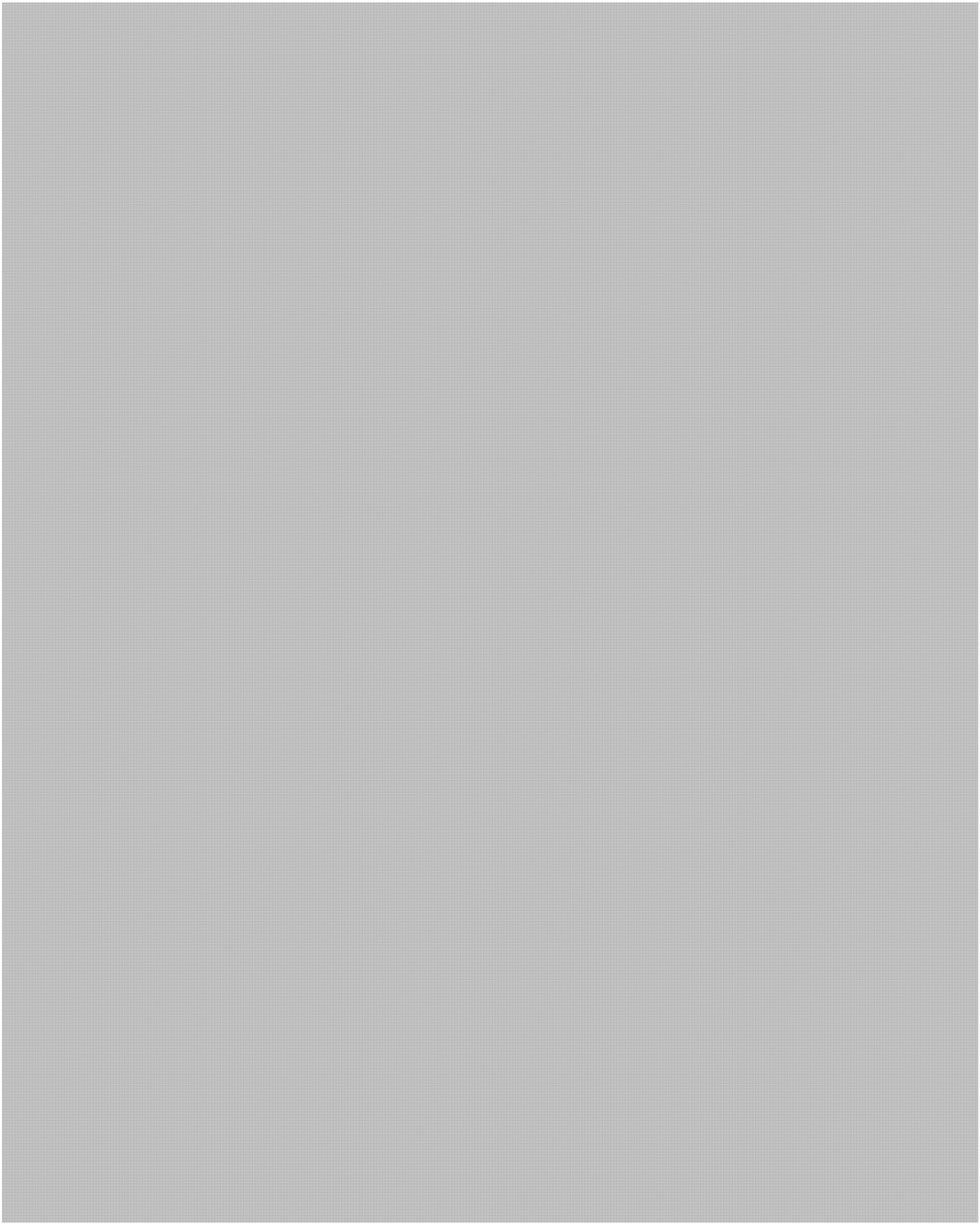
s.21(1)(a)

s.21(1)(b)



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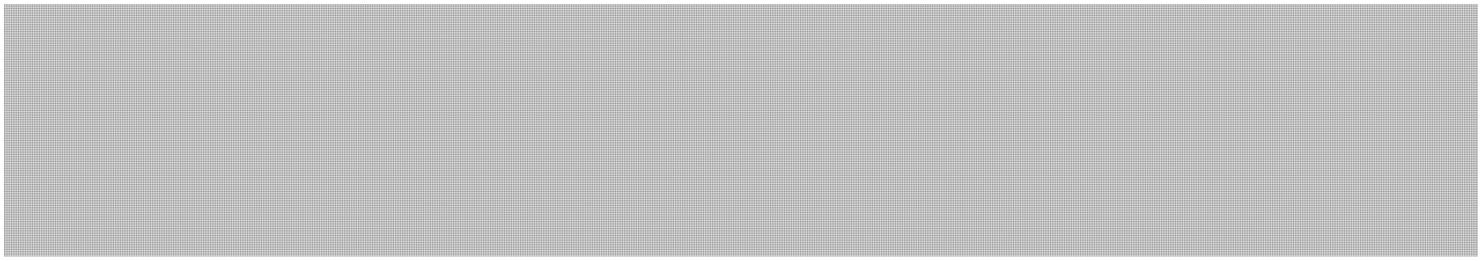

Lara Sloan | Communications Advisor | Conseillère en communications | Fisheries and Oceans Canada | Pêches et Océans Canada | Tel: 250.363.3749 | Cel: [redacted] Lara.Sloan@dfo-mpo.gc.ca
www.pac.dfo-mpo.gc.ca

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Khanna, Sukriti

From: Davis, Neil
Sent: August-10-18 1:14 PM
To: Cottrell, Paul; Sloan, Lara; Thornton, Sheila
Cc: Bate, Dan
Subject: RE: URGENT - quick update to the media lines

Lara, did you get my edits? I don't see them in my sent folder

From: Cottrell, Paul
Sent: Friday, August 10, 2018 12:56 PM
To: Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>
Cc: Bate, Dan <Dan.Bate@dfo-mpo.gc.ca>
Subject: RE: URGENT - quick update to the media lines

Hi Lara,
Looks good, some miner edits in red.
cheers,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Sloan, Lara
Sent: Friday, August 10, 2018 12:24 PM
To: Davis, Neil; Cottrell, Paul; Thornton, Sheila
Cc: Bate, Dan
Subject: URGENT - quick update to the media lines

Hi. Are you all ok with these updates?

Media Lines

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[redacted]

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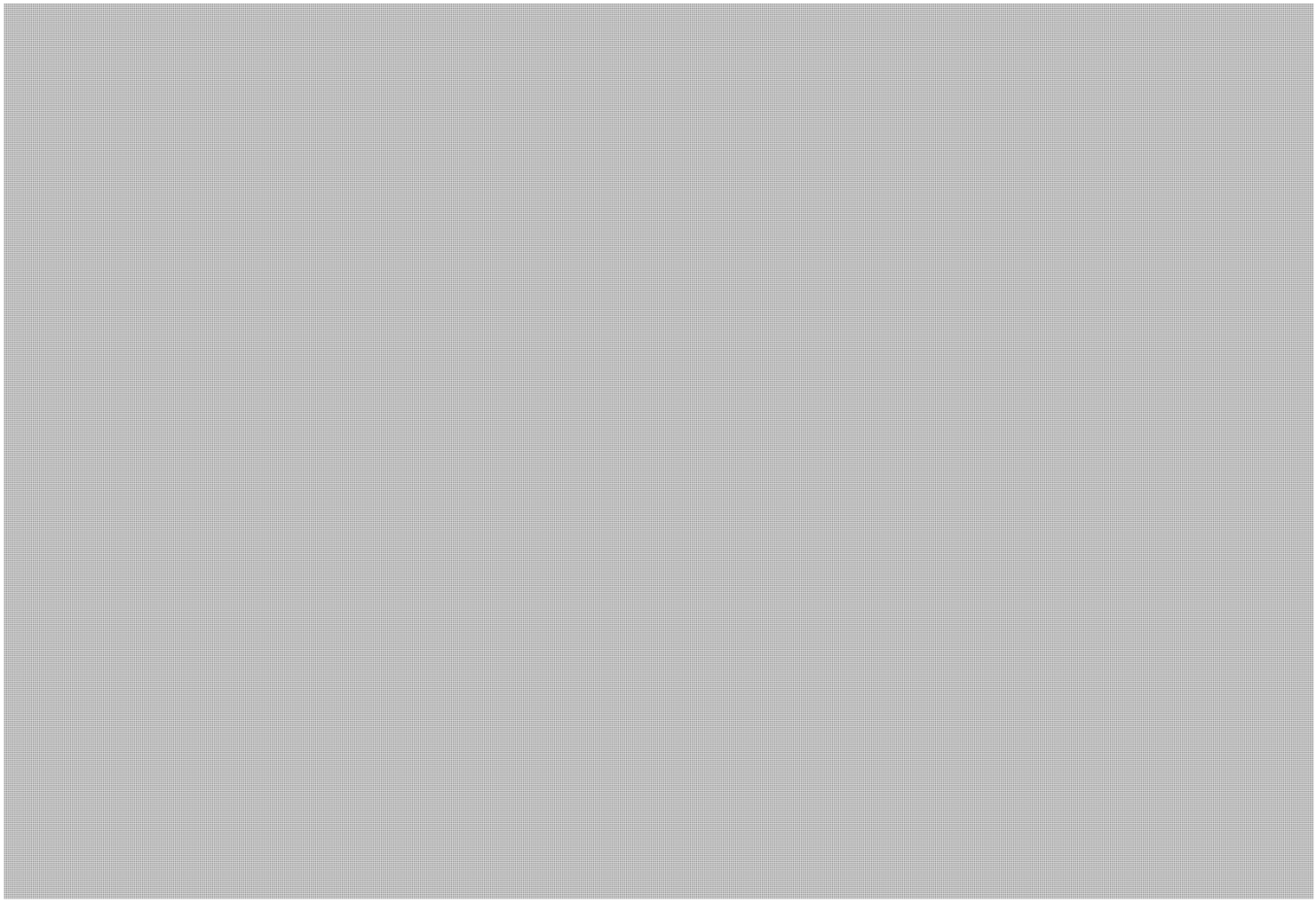

Lara Sloan | Communications Advisor | Conseillère en communications | Fisheries and Oceans Canada | Pêches et Océans Canada |Tel: 250.363.3749 | Cel: [redacted] Lara.Sloan@dfo-mpo.gc.ca
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Khanna, Sukriti

From: Moore, Kendra
Sent: August-10-18 1:17 PM
To: Jenkins, Randy
Cc: Scott, Paul G; Gilchrist, Brett; Harber, Lee; Cottrell, Paul
Subject: Updated SRKW Note
Attachments: MECTS-#3949687-v6-IN-Southern_Resident_Killer_Whale_Update.docx

Hi Randy,

Attached is the updated SRKW note on J50 and J35 for briefing up.

Thanks,

Kendra

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page 28

s.19(1)

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Khanna, Sukriti

From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: August-10-18 7:27 PM
To: Kristin Wilkinson - NOAA Federal
Cc: Cottrell, Paul; Deborah Fauquier
Subject: Re: Daily Debrief - Thursday, August 9th - J50 Response Activities Conducted

Thank you Kristin and Deb

From: Kristin Wilkinson - NOAA Federal <[redacted]
Sent: Friday, August 10, 2018 7:15:09 PM
To: Raverty, Stephen AGRI:EX
Cc: Cottrell, Paul; Deborah Fauquier
Subject: Re: Daily Debrief - Thursday, August 9th - J50 Response Activities Conducted

Stephen,

We would be happy to have you join us, I apologize you were not included in previous calls. I'll keep you informed of future vet calls as well.

If we are not on the water or have any updates the call will be cancelled, I send an email and cancel the Google Invite.

Talk to you tonight.

Kristin

On Fri, Aug 10, 2018 at 4:13 PM, Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca<mailto:Paul.Cottrell@dfo-mpo.gc.ca>> wrote:
Sorry Stephen, I thought you were on the distribution list and calls. You should be, thanks Kristin for adding Stephen.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Raverty, Stephen AGRI:EX
Sent: Friday, August 10, 2018 4:11 PM
To: Kristin Wilkinson - NOAA Federal
Cc: Cottrell, Paul
Subject: Fw: Daily Debrief - Thursday, August 9th - J50 Response Activities Conducted

Kristin
If possible may I please be added to the distribution list for updates and notified of the vet calls Thank you Stephen

---

From: Deborah Fauquier - NOAA Federal <[redacted]>
Sent: Friday, August 10, 2018 3:01:43 PM
To: Raverty, Stephen AGRI:EX
Subject: Fwd: Daily Debrief - Thursday, August 9th - J50 Response Activities Conducted

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FYI not sure if Paul or Joe are sharing these with you. Thanks. Deb

---------- Forwarded message ----------
From: Kristin Wilkinson - NOAA Federal

>
Date: Fri, Aug 10, 2018 at 2:08 AM
Subject: Daily Debrief - Thursday, August 9th - J50 Response Activities Conducted
To: Katy Foster

>>>, "Brad Hanson (NOAA Federal)"

, Holly Fearnbach

John Durban - NOAA Federal

Teri Rowles

>>, Lynne Barre - NOAA Federal

>>, Marty Haulena

>, Deborah Giles

Michael Milstein - NOAA Federal

Scott Rumsey - NOAA Federal

Mark Strom - NOAA Federal

>>>, Ruth Howell

>>, Mike Ford

Jim Milbury - NOAA Federal

>>, Barry Thom - NOAA Federal

>, Sheila Thornton <Sheila.Thornton@dfo-mpo.gc.ca<mailto:Sheila.Thornton@dfo-mpo.gc.ca><mailto:Sheila.Thornton@dfo-mpo.gc.ca<mailto:Sheila.Thornton@dfo-mpo.gc.ca>>>, Chris Yates - NOAA Federal

Forbes Darby - NOAA Federal

Kate Naughten

John Ewald - NOAA Federal

>, "Becker, Penny A (DFW)"

"Cottrell, Paul" <Paul.Cottrell@dfo-mpo.gc.ca<mailto:Paul.Cottrell@dfo-

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mpo.gc.ca><mailto:Paul.Cottrell@dfo-mpo.gc.ca<mailto:Paul.Cottrell@dfo-mpo.gc.ca>>>, Teresa Mongillo

Amilee Wilson - NOAA Federal

Jennifer Ise - NOAA Federal

>, Emma Htun - NOAA Federal

>>>, Samantha Guidon - NOAA Federal

Katherine Brogan - NOAA Affiliate

, Jennie Lyons

v>>>, Deborah Fauquier

>, jeff foster

, Sarah Mesnick

, Director Marine Mammal

a.

Kevin Werner - NOAA Federal

a

Joseph Karl Gaydos

Jim McBain

"Kimball, Taylor P (DFW)"

Hello All -

It was a very full day filled with several successes towards accomplishing our priorities. These activities were conducted in U.S. waters (although the team did start out in Canada today).

Here is what we achieved:
1. 6 hours on the water with J50
2. A comprehensive veterinary assessment of J50 by Dr. Marty Haulena with the Vancouver Aquarium 3. Breath sample collection 4. Antibiotic injection 5. Collection of fish scales from predation event by her immediate pod 6. Photo, video, and UAS documentation of J50 and the response efforts

J50 was reported to be very active and while she was by herself (not unusual for her behavior) when she was first encountered she joined up with her pod quickly and stayed with them for the remainder of the day. She could keep up with her pod easily, took deep dives, and was not struggling to get to the surface. The team did not see her eat but others in her group were actively feeding and prey sharing was noted. They did note of her small size and how remarkable her emaciation was.

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Future goals if we get to spend more time with J50:
1. Collection of a fecal sample
2. Additional observations of her behavior, condition, and predation events 3. Live fish trials may begin as early as Friday

Future goals if we observe J35:
1. Documentation of her behavior, overall condition, and pod dynamic

Other goals:
1. Schedule a veterinary call to discuss the health assessment 2. Send the breath sample to Seattle for analysis 3. Improve on-water communications between the response vessels and coordination staff

A HUGE congratulations to the response team - I am very proud of what they were able to accomplish today. A thank you to the Communications and External Affairs team as well for all of their excellent coverage of our activities and goals.

All for now,

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division West Coast Region, Based in Seattle Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

[https://lh6.googleusercontent.com/kfIlmyK4-Ak0tGuQJ4TGft4lpbmL8ra6KA8Bw7Z4sP-CjpinVpZIDfS_z-vTtDxlMB_ZJsl5ThrXstIiHBtu1oCryw1uJ69kXRd4w4h8MKDeDfPVuYKKR6MR9A]

On Tue, Aug 7, 2018 at 5:47 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:

Hello All -

J50 was sighted alive today by DFO off of Port Renfrew. Sheila Thornton will be providing images to the team later today. No on water actions were taken by the response team today.

Our evening call with the debrief team has been cancelled since Sarah Wilkin and I spent the day in Friday Harbor meeting with the core response team. We met for 4.5 hours at Friday Harbor Labs and discussed possible scenarios, near term objectives, and scheduling. The team also identified additional sample collection that would be ideal to have but they will remain secondary to breath, fecal, the veterinary health assessment and antibiotic administration goals.

Once those goals are accomplished we will be working on providing temporary nutritional support therapy to J50. This action is authorized and all of the needed resources are available and in place for deployment.

If we do deploy the response team and encounter J50 we will be working with WDFW Enforcement and Soundwatch to maintain a 500 yard perimeter.

That's all for now,

--
Kristin Wilkinson

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NOAA Fisheries, Protected Resources Division West Coast Region, Based in Seattle Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted]Cell

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On Mon, Aug 6, 2018 at 9:53 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:

Good Evening -

It was another day without whales in the inland waters so our response team did not do any photography, sample collection, or perform a health assessment. K and L pod were sighted at Swiftsure Bank by DFO, no sign of J pod.

We were successful at staging all of the needed veterinary supplies at Friday Harbor Labs so they are readily available for the future. Dr. Hendrik Nollens from Sea World flew from San Diego to Friday Harbor today and is poised to conduct a health assessment on J50 and provide an injection of antibiotics to her if given the opportunity tomorrow. Sarah Wilkin, our National Stranding Coordinator also flew to Seattle and Sarah and I will be traveling to the San Juans early tomorrow morning to meet with the core team to discuss logistics and operations for the coming week. We will be on the island coordinating with the team on Tuesday and Wednesday.

The Whale Sanctuary Project and the Lummi Tribe in coordination with NWFSC did a test run today to work through the logistics of the transport of fish. Two vessels were utilized, the King Co. DNR & Parks Sound Guardian and the Lummi Tribe Enforcement vessel. There was a blessing of the fleet and the test run went smoothly with no significant challenges noted. This project is still pending authorization but will be available on Tuesday if given the approval to proceed.

WDFW Enforcement will be doing dedicated Southern Resident Killer Whale patrols over the next 7 days. Our response team will be working in coordination with Enforcement if their assistance is needed for perimeter control or support.

The Communications Team shared the below resources with the team earlier today:
http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/updates-j50-j35.html
Linked from the homepage under What's New: http://www.westcoast.fisheries.noaa.gov/index.html
Linked from J50 news story: http://www.westcoast.fisheries.noaa.gov/stories/2018/08032018_srkw_j50.html
Short url: http://bit.ly/NOAAJ50J35
There is also an email address that the public can use to email us their input and ideas, Killerwhale.help@noaa.gov<mailto:Killerwhale.help@noaa.gov><mailto:Killerwhale.help@noaa.gov<mailto:Killerwhale.help@noaa.gov>>

All for now, thanks everyone -

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division West Coast Region, Based in Seattle Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted]Cell

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[https://lh6.googleusercontent.com/kfIlmyK4-Ak0tGuQJ4TGft4lpbmL8ra6KA8Bw7Z4sP-CjpinVpZlDfS_z-vTtDxlMB_ZJsl5ThrXstIiHBtu1oCryw1uJ69kXRd4w4h8MKDeDfPVuYKKR6MR9A]

On Mon, Aug 6, 2018 at 1:57 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:

Hello All -

The evening debrief calls are going to focus on operations with the core field response team. After the nightly call, I will be providing email updates to all of you with what we accomplished that day and what our next day plans are. Thank you for being flexible and understanding as we get our operations and field teams staffed and organized.

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division West Coast Region, Based in Seattle Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

[https://lh6.googleusercontent.com/kfIlmyK4-Ak0tGuQJ4TGft4lpbmL8ra6KA8Bw7Z4sP-CjpinVpZlDfS_z-vTtDxlMB_ZJsl5ThrXstIiHBtu1oCryw1uJ69kXRd4w4h8MKDeDfPVuYKKR6MR9A]

On Sun, Aug 5, 2018 at 10:14 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:

Hi Everyone -

Thank you to those of you who were able to join us tonight for the Sunday debrief call. I apologize that I had to ask some of you to sign off since we were at capacity and some of the field response team was unable to sign in.

DFO reported seeing L's and K's west of Port Renfrew but J pod was not sighted today. Heavy fog has been present which has limited sightings of the whales.

We do have some updates on prioritization of field response activities; 1. Sample Collection - breath and fecal 2. Health Assessment & Injection of a long lasting antibiotic via pole syringe if possible, if not, remote delivery via Dan Inject. Dr. Marty Haulena and Dr. Jim McBain are on standby for Monday and Dr. Hendrik Nollens on Tuesday. The antibiotic treatment would not be available until Tuesday.
3. Providing temporary nutritional support therapy to J50 in coordination with The Whale Sanctuary Project, the Lummi Tribe and NWFSC. The Lummi Tribe will be doing a dry run on Monday and will be ready to transport live fish on Tuesday. They would have ~ 12 fish per day. John Gussman will provide UAS services to document the process and whale behavior. Discussions will continue on oral medication treatment.

Communications provided an update from their team about the website, public input, social media (1 post per day), partner engagement, and the daily press call at 10am.

I'll be hosting our consultation team call tomorrow morning from 9:30-11 and will likely head up to the San Juans on Monday night or early Tuesday morning to meet with the team in person.

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All for now,

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division West Coast Region, Based in Seattle Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted]Cell

[https://lh6.googleusercontent.com/kfIlmyK4-Ak0tGuQJ4TGft4lpbmL8ra6KA8Bw7Z4sP-CjpinVpZIDfS_z-vTtDxlMB_ZJsl5ThrXstIiHBtu1oCryw1uJ69kXRd4w4h8MKDeDfPVuYKKR6MR9A]

On Sat, Aug 4, 2018 at 10:13 PM, Kristin Wilkinson - NOAA Federal [redacted]>>> wrote:
Good Evening Everyone -

Thank you to those of you who were able to join us tonight for the Saturday debrief call.

While J50 was not sighted today we can confirm that J pod is headed inland and was last sighted eastbound near Jordan River and Sooke around 7pm. They will likely come into the San Juan area tonight so we are very hopeful we will accomplish on Sunday the below goals;

1. Fecal sample collection from J50 - Deborah Giles, University of Washington 2. Breath sample collection from J50 - Hanson, NWFSC 3. Sample collection of skin if needed, areas of discoloration have been noted - Giles or Hanson 4. Veterinary medical assessment on J50 - Haulena, Vancouver Aquarium (Dr. Haulena will be on Brad Hanson's vessel) 5. Additional imagery and video of J50 by UAS - Durban and Fernbach, SWFSC and SR3 Images of the flukes and overall skin appearance is of interest to the veterinarians as well as respiration rate.
6. After the veterinary health assessment is complete a veterinarian call will be hosted by NOAA Fisheries - timing to be determined. This will be a small group of veterinarians to discuss the best treatment for J50's condition.

The NOAA Communications and External Affairs team provided a very valuable overview of their plans to communicate with the public and with the media. I'll let Ruth and Forbes outline their plan in a separate email. Any media inquires can be directed to the Communications Team, [redacted]or via cell at [redacted]Michael did reach out to the news directors in the Seattle area requesting they be mindful of the on-water activities so we can make the most of our time with J50 and the other SRKW's.

Many of you have asked for permission to view the Google Drive, here is a direct link and I will also follow up with an invite. We have all agreed that images will not be shared outside of the group.
https://drive.google.com/drive/folders/1Gg5Whty6QvPFPYJEUps2PtvTXgRDT5eq?usp=sharing

We will plan to talk again tomorrow night, Sunday, August 5th at 9pm. Please call into 503-326-7672.

A huge thank you to everyone involved!

--
Kristin Wilkinson

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NOAA Fisheries, Protected Resources Division West Coast Region, Based in Seattle Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted]Cell

[https://lh6.googleusercontent.com/kfIlmyK4-Ak0tGuQJ4TGft4lpbmL8ra6KA8Bw7Z4sP-CjpinVpZIDfS_z-vTtDxlMB_ZJsl5ThrXstIiHBtu1oCryw1uJ69kXRd4w4h8MKDeDfPVuYKKR6MR9A]

--

Deborah Fauquier, DVM, MPVM, PhD
Veterinary Medical Officer
Marine Mammal Health and Stranding Response Program Office of Protected Resources NOAA/National Marine Fisheries Service
1315 East-West Highway, Room 13659
Silver Spring, MD 20910
Tel: 301-427-8465; Work Cell [redacted]

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Email: [redacted]

--

Kristin Wilkinson
NOAA Fisheries, Protected Resources Division West Coast Region, Based in Seattle Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted]Cell

[https://lh6.googleusercontent.com/kfIlmyK4-Ak0tGuQJ4TGft4lpbmL8ra6KA8Bw7Z4sP-CjpinVpZIDfS_z-vTtDxlMB_ZJsl5ThrXstIiHBtu1oCryw1uJ69kXRd4w4h8MKDeDfPVuYKKR6MR9A]

s.21(1)(a)
s.21(1)(b)

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-10-18 6:35 AM
To: Harber, Lee; Cottrell, Paul
Cc: Scott, Paul G
Subject: J50 Update Note
Attachments: MECTS-#3949687-v1-IN-Southern_Resident_Killer_Whale_Update (004).docx

Good morning Lee and Paul,

Mino is seeking an update this morning and after the media briefing this afternoon EDT regarding J50/J35.

Attached is an Issue Note for your review as most of the key information is from a NOAA tweet from yesterday.

If you could send me any comments or include additional information that would be great.

Thanks so much!

Kendra

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Southern Resident Killer Whale Update

Issue: The rapidly deteriorating health condition of Southern Resident Killer Whale (SRKW) J50 of SRKW J-pod has prompted the U.S. National Oceanic and Atmospheric Administration (NOAA) to propose an emergency action plan to treat her. The response team located J50 yesterday Thursday August 9th and began sampling and treatment. Additionally, J35 was last seen on Wednesday August 8th travelling with her dead calf.

Update:

- NOAA's social media twitter platform indicated that the response team located J50 in Canadian waters near Race Rocks area (south of Victoria) and followed her into U.S. waters near San Juan Island on Thursday August 9, 2018.
    - Veterinarian Marty Haulena of Ocean Wise conducted a health assessment of J50, and the response team obtained a breath sample (to assess for infection) and administered a dose of antibiotics via a dart.
    - Yesterday on August 9th, DFO Pacific Region issued an authorization to disturb marine mammals pursuant to section 38 of the MMR, in addition to provisions under section 52 of the FGR and section 74 of SARA to NOAA.
    - This authorization permits NOAA to conduct sampling of J50, including breath, fecal, mucus and skin; visual veterinary health assessment; and provide antibiotic treatment via pole syringe or remote delivery.
- A NOAA vessel (Sound Guardian) will permit reporters onboard and will serve as a safety vessel for response operations for J50. This boat will also have Chinook Salmon onboard as a backup feeding vessel within U.S. waters.
- J35 has been travelling with her dead calf since it's death on July 24 2018, an unprecedented duration for carrying a calf's carcass.
- At this time, removing the calf is not being considered, due to the interests of human and animal safety. At this point a permit for J35 is not being considered but would follow a similar permit process to the one for J50.
- DFO and NOAA vessels are continuing to survey Southern Vancouver Island in search of J pod in bad weather conditions. Conditions are forecasted to be poor into Saturday.
- NOAA will hold their daily media briefing at 10 am PDT to update on J50 and J35.

Background:

- Southern Resident killer whales are an endangered, specialized population of killer whales that now number 75, the lowest in decades. Female whales are especially valuable to the population given their reproductive potential.
- Given the limited number of females in such a small population (75 individuals), it would be a significant blow to the population to lose this individual.
- NOAA's emergency action plan includes several treatment options: supplemental feeding in the wild via a sluice off the back of a boat; oral medication inside fish for feeding to J50, injection of medication with a dart; and penning J50 to enable hydration, feeding, and medication.
    - The antibiotic being used by NOAA is a general prophylactic that could help with a broad spectrum of health issues, which is recommended from past sightings.

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Khanna, Sukriti

From: Demsky, Arthur
Sent: August-10-18 4:53 PM
To: Cottrell, Paul
Cc: Green, Sherri; Lyth, Ryan; Tomlin, Trevor; Guptill, Beth
Subject: J50

Paul
Let us know if you need assistance with efforts on Orca J50 and the nutritional support therapy that is being talked about to help restore her health.
There is mention of utilizing a number of vessels to accomplish the tasks required – partner agency NOAA and ourselves.

Beth is back in the PM-6 spot Tuesday. Sherri Green acting PM-5 Langley ...no PM5 in Steveston... Trevor Tomlin (acting) and Ryan Lyth are the Field Sups there

The Langley 9m RHIB is currently out of commission due to a trailer issue... 6 m available...Steveston has a 7m...

Art Demsky, Detachment Supervisor
Fisheries and Oceans Canada
Conservation and Protection Branch
Fraser Valley West
5550 268 Street, Langley, BC V4W 3X4
604-607-4168 (office)
(cell)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-10-18 1:12 PM
To: Sloan, Lara
Subject: RE: URGENT - quick update to the media lines

Yes, along with Cam and Mya. Should be in range of j-pod in about 30 minutes.
Cheers,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Sloan, Lara
Sent: Friday, August 10, 2018 12:56 PM
To: Cottrell, Paul
Subject: RE: URGENT - quick update to the media lines

Thanks ☺ Are you out on the water with J50 today?

From: Cottrell, Paul
Sent: August-10-18 12:56 PM
To: Sloan, Lara; Davis, Neil; Thornton, Sheila
Cc: Bate, Dan
Subject: RE: URGENT - quick update to the media lines

Hi Lara,
Looks good, some miner edits in red.
cheers,
Paul

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Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Sloan, Lara
Sent: Friday, August 10, 2018 12:24 PM
To: Davis, Neil; Cottrell, Paul; Thornton, Sheila
Cc: Bate, Dan
Subject: URGENT - quick update to the media lines

Hi. Are you all ok with these updates?

Media Lines

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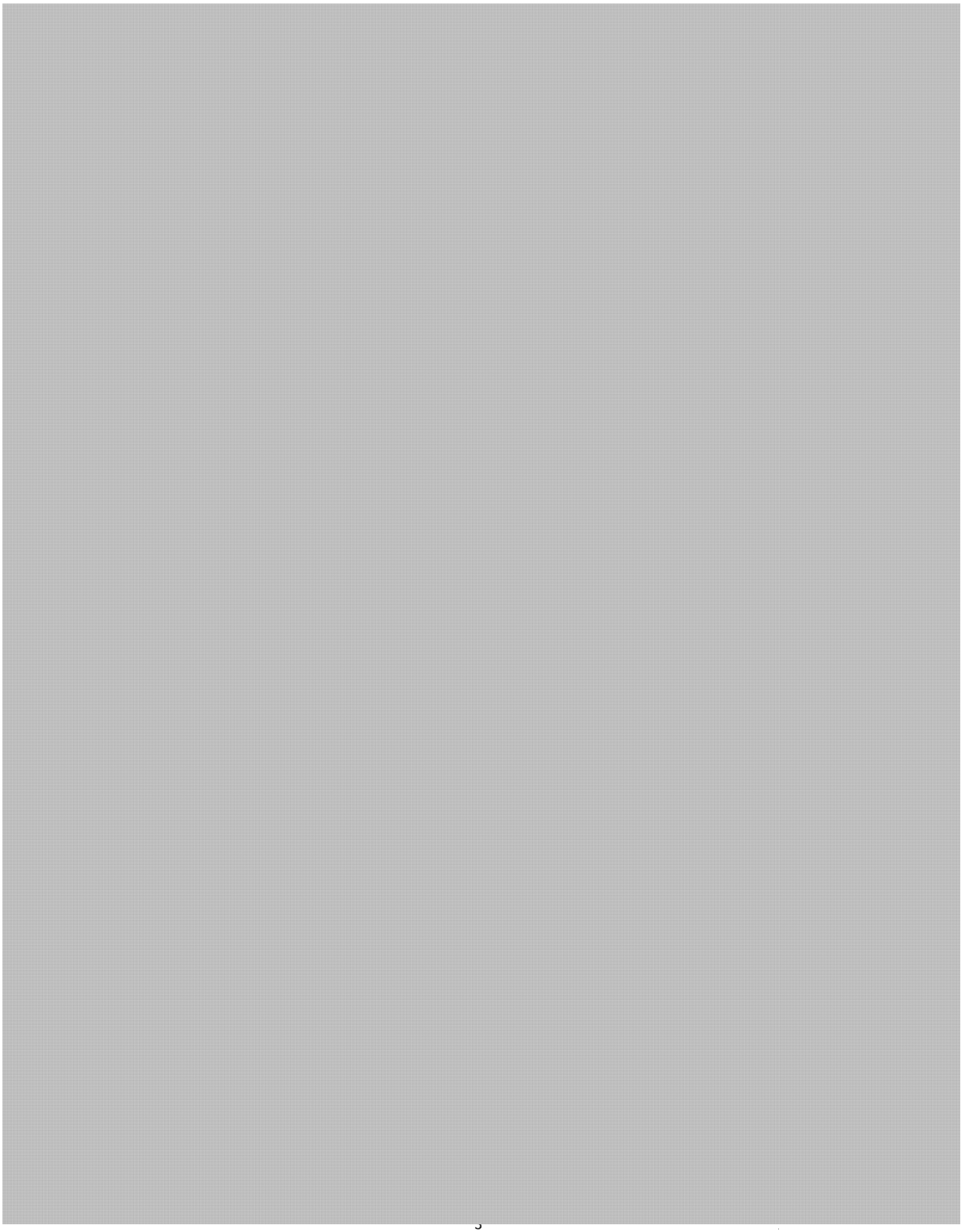

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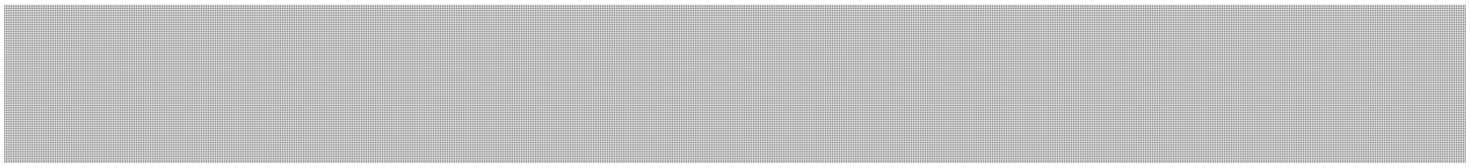

Lara Sloan | Communications Advisor | Conseillère en communications | Fisheries and Oceans Canada | Pêches et Océans Canada |Tel: 250.363.3749 | Cel: [redacted] Lara.Sloan@dfo-mpo.gc.ca
www.pac.dfo-mpo.gc.ca

Follow us on Twitter! http://twitter.com/DFO_Pacific

Suivez-nous sur Twitter! http://twitter.com/MPO_Pacifique

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-10-18 11:55 AM
To: Sloan, Lara
Subject: RE: J50 Update

Thanks Lara, good to have you back!

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Sloan, Lara
Sent: Friday, August 10, 2018 11:52 AM
To: Cottrell, Paul
Subject: FW: J50 Update

How are you doing out there? Let me know if I can help with anything/get some messages out ☺

From: Girouard, Louise
Sent: August-10-18 9:39 AM
To: Sloan, Lara; Bate, Dan
Subject: Fw: J50 Update

Fyi

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Friday, August 10, 2018 9:33 AM
To: Moore, Kendra
Cc: Scott, Paul G; Davis, Neil; Thomson, Andrew; Girouard, Louise; Lowe, Carmel
Subject: RE: J50 Update

Hi Kendra,

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As an update, J50 was spotted in Canadian waters off Sooke yesterday afternoon and assessed by the research team, Dr Brad Hansen (NOAA) and Dr Marty Haulina (Vancouver Aquarium). We (DFO) issued an authorization for research activities yesterday (health assessment-breath and fecal collection, antibiotic delivery by pole or dart) just in the nick of time.

Here is what was achieved:
1. 6 hours on the water with J50 starting in Canada off Sooke and ending at San Juan Islands US waters
2. A comprehensive veterinary assessment of J50 by Dr. Marty Haulena (Vancouver Aquarium)
3. Breath sample collection
4. Antibiotic injection
5. Collection of fish scales from predation event by her immediate pod
6. Photo, video, and UAS documentation of J50 and the response efforts

J50 was reported to be very active and while she was by herself (not unusual for her behavior) when she was first encountered she joined up with her pod quickly and stayed with them for the remainder of the day. She could keep up with her pod easily, took deep dives, and was not struggling to get to the surface. The team did not see her eat but others in her group were actively feeding and prey sharing was noted. They did note of her small size and how remarkable her emaciation was.

Future goals today if J50 located:
1. Collection of a fecal sample
2. Additional observations of her behavior, condition, and predation events
3. Live fish trials may begin as early as Friday in the US

Future goals if we observe J35:
1. Documentation of her behavior, overall condition, and pod dynamic

Other goals:
1. Schedule a veterinary call to discuss the health assessment (NOAA & DFO)
2. Send the breath sample for analysis

I'll keep you posted.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

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Vancouver, BC

V6C 3S4

(604) 666-9965

From: Moore, Kendra
Sent: Friday, August 10, 2018 6:35 AM
To: Harber, Lee; Cottrell, Paul
Cc: Scott, Paul G
Subject: J50 Update Note

Good morning Lee and Paul,

Mino is seeking an update this morning and after the media briefing this afternoon EDT regarding J50/J35.

Attached is an Issue Note for your review as most of the key information is from a NOAA tweet from yesterday.

If you could send me any comments or include additional information that would be great.

Thanks so much!

Kendra

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de la Loi sur l'accès à l'information.

Khanna, Sukriti

From: Cottrell, Paul
Sent: August-10-18 10:54 AM
To: Thomson, Andrew
Subject: RE: J50 Update

Hi Andy,
I will be on the water along with CP from Victoria and Straitwatch (DFO HSP funded group). I was trying to get MM science folks to keep a vessel in the Sooke area to monitor but think they may have shut down operations and are moving to Johnston Strait.
Cheers,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Thomson, Andrew
Sent: Friday, August 10, 2018 10:19 AM
To: Cottrell, Paul
Subject: Re: J50 Update

Who from DFO will be continuing to assess / observe her? What's the vessel situation?

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca

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Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Cottrell, Paul
Sent: Friday, August 10, 2018 9:33 AM
To: Moore, Kendra
Cc: Scott, Paul G; Davis, Neil; Thomson, Andrew; Girouard, Louise; Lowe, Carmel
Subject: RE: J50 Update

Hi Kendra,

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Future goals if we observe J35:
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Other goals:
1. Schedule a veterinary call to discuss the health assessment (NOAA & DFO)
2. Send the breath sample for analysis

I'll keep you posted.

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de la Loi sur l'accès à l'information.

s.21(1)(a)

s.21(1)(b)

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Moore, Kendra
Sent: Friday, August 10, 2018 6:35 AM
To: Harber, Lee; Cottrell, Paul
Cc: Scott, Paul G
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Thanks so much!

Kendra

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Khanna, Sukriti

From: Jenkins, Randy
Sent: August-10-18 7:08 AM
To: Thomson, Andrew; Davis, Neil; Harber, Lee
Cc: Moore, Kendra
Subject: FW: J50 - Updated note
Attachments: MECTS-#3949687-v1-IN-Southern_Resident_Killer_Whale_Update (Aug 10).docx

FYI... given the events overnight (or at least based on NOAA tweet) we updated the note this morning and sent it along.... Given the time of day I sent it without having anyone in Pacific review but clearly stated info is based on NOAA tweet. Kendra will update again for the end of day with any new information and planning for the weekend. Feel free to offer any commentary and or information for this afternoons note. (FYI... [redacted] Robert Day is acting). I've asked Kendra to follow up directly with Lee later today.
Thanks.
Randy

From: Jenkins, Randy
Sent: Friday, August 10, 2018 10:02 AM
To: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Day, Robert <Robert.Day@dfo-mpo.gc.ca>; Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>
Cc: Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>
Subject: J50 - Updated note

Attached is an updated not to include events overnight. We will update again later in the day once the daily briefings are concluded and more is known.
Randy

Randy P. Jenkins
Director - Integrated Resource Management – National Programs
Directeur - Gestion des ressources intégrées – Programmes nationale
Fisheries and Harbour Management / Gestion des pêchés et des ports
200 rue Kent Street, 13W065
Ottawa, Ontario, K1A 0E6

Tel/Tél: (613) 990-0018 Fax/Télécopieur: (613) 990-7051
E-Mail / Courriel: Randy.Jenkins@dfo-mpo.gc.ca

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Southern Resident Killer Whale Update

(August 10, 2018 – 10:00 EDT)

Issue: The rapidly deteriorating health condition of Southern Resident Killer Whale (SRKW) J50 of SRKW J-pod has prompted the U.S. National Oceanic and Atmospheric Administration (NOAA) to propose an emergency action plan to treat her. The response team located J50 on Thursday, August 9th and began sampling and treatment. Additionally, J35 was last seen on Wednesday August 8th travelling with her dead calf.

Update:

- NOAA's social media twitter platform indicated that the response team located J50 in Canadian waters near Race Rocks area (south of Victoria) and followed her into U.S. waters near San Juan Island on Thursday August 9, 2018.
    - Veterinarian Marty Haulena of Ocean Wise conducted a health assessment of J50, and the response team obtained a breath sample (to assess for infection) and administered a dose of antibiotics via a dart.
    - Yesterday on August 9th, DFO Pacific Region issued to NOAA an authorization to "disturb marine mammals" pursuant to section 38 of the MMR, in addition to provisions under section 52 of the FGR and section 74 of SARA to NOAA.
    - This authorization permits NOAA to conduct sampling of J50, including breath, fecal, mucus and skin; visual veterinary health assessment; and to provide antibiotic treatment via pole syringe or remote delivery.
- A NOAA vessel (Sound Guardian) will permit reporters onboard and will serve as a safety vessel for response operations for J50. This boat will also have Chinook Salmon onboard as a backup feeding vessel within U.S. waters.
- J35 has been travelling with her dead calf since its death on July 24, 2018, an unprecedented duration for carrying a calf's carcass.
- At this time, removing the calf is not being considered, due to the interests of human and animal safety. At this point a permit for J35 is not being considered but would follow a similar permit process to the one for J50.
- DFO and NOAA vessels are continuing to survey Southern Vancouver Island in search of J pod in bad weather conditions. Conditions are forecasted to be poor into Saturday.
- NOAA will hold their daily media briefing at 10 am PDT to update on J50 and J35.

Background:

- Southern Resident killer whales are an endangered, specialized population of killer whales that now number 75, the lowest in decades. Female whales are especially valuable to the population given their reproductive potential.
- Given the limited number of females in such a small population (75 individuals), it would be a significant blow to the population to lose this individual.
- NOAA's emergency action plan includes several treatment options: supplemental feeding in the wild via a sluice off the back of a boat; oral medication inside fish for feeding to J50, injection of medication with a dart; and penning J50 to enable hydration, feeding, and medication.
    - The antibiotic being used by NOAA is a general prophylactic that could help with a broad spectrum of health issues, which is recommended from past sightings.

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s.19(1)

Khanna, Sukriti

From: Girouard, Louise
Sent: August-10-18 6:39 AM
To: Thomson, Andrew; Davis, Neil; Lowe, Carmel
Cc: Cottrell, Paul; Thornton, Sheila; Sloan, Lara; Bate, Dan; Antcliffe, Bonnie; Reid, Rebecca; Kaba, Kyle
Subject: Fw: J50 Comms Updates -- Thursday's efforts.

Good morning,
Please see below summary of yesterday's intervention with J50 that was sent to NHQ.

Consideration for today's call: Vancouver Aquarium veterinarian Marty Haulena will give details of the engagement with J50. Next step is to determine whether to proceed with trial feeding depending on conditions and the location of J pod.

We propose to have Andy, Paul and Sheila as spokes on the NOAA\DFO 10 am call again today.

Based on other media coverage. I would anticipate questions around J35 and what options is the Government considering to come up.

Thanks.

L

From: Jackson, Ashley <Ashley.Jackson@dfo-mpo.gc.ca>
Sent: Friday, August 10, 2018 4:03 AM
To: Morris, Christina; Smith, Kathleen; Northcott, Jennifer; Burns, Adam; Gilchrist, Brett; Jenkins, Randy; Moore, Kendra; Girouard, Louise; Saindon, Carole; Bate, Dan; McElhone, Kathryn; Geraldes, Betty; Wiebe, Robert; Hinds, Kimberly; Lapointe, Sylvie; Patrick, Lindsey; Scott, Paul G
Subject: FW: J50 Comms Updates -- Thursday's efforts.

FYI - Last evening's activities on social media.

We retweeted NOAA's tweet from the PAC twitter account.

Thanks AJ

From: Michael Milstein - NOAA Federal [redacted]
Sent: August 10, 2018 1:33 AM
To: Anderson, Laura
Cc: Girouard, Louise; Jim Milbury - NOAA Federal; Jackson, Ashley; Ruth Howell - NOAA Federal
Subject: Re: Updates on today's efforts.

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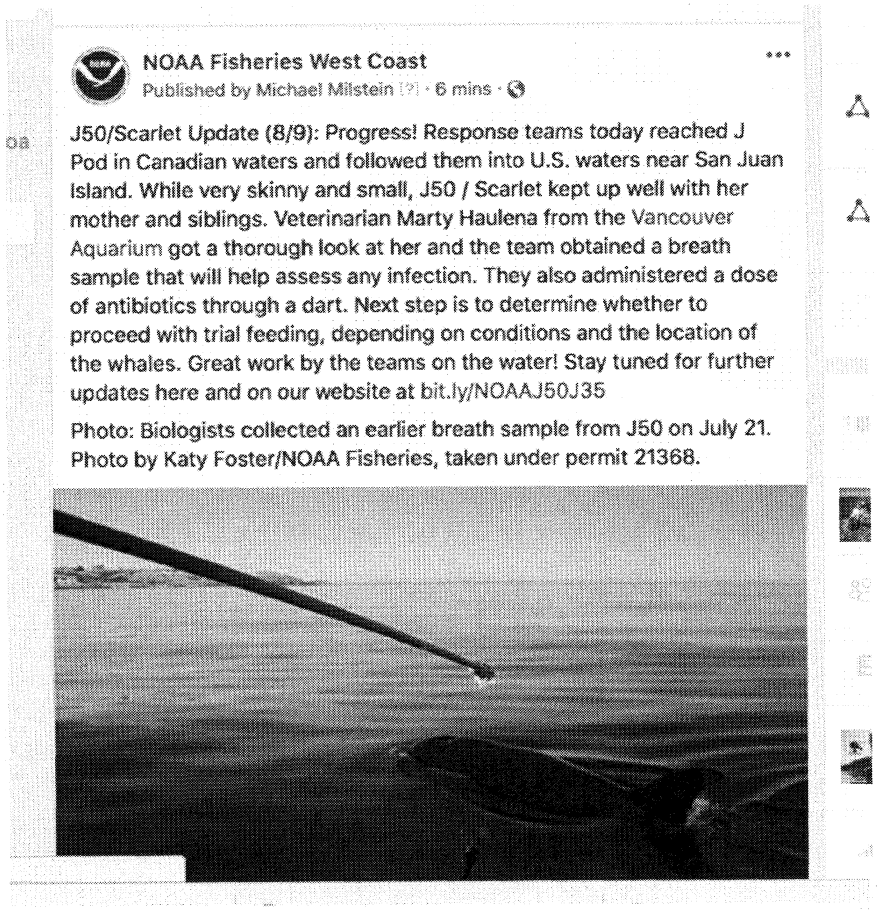
Here is our FB post.



They reached the whales and followed them into US waters near San Juan Island. Marty Haulena, the vet from Vancouver Aquarium, completed a thorough assessment and said J50, although very skinny and small, was keeping up well with her mother and siblings. They collected a blow sample and delivered a dose of antibiotics through a dart. They will determine whether to proceed with feeding trial tomorrow, depending on conditions and the location of the whales.

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pages 2750 to / à 2752

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Khanna, Sukriti

From: Jenkins, Randy
Sent: August-10-18 1:45 PM
To: Lapointe, Sylvie; Burns, Adam; Day, Robert; Patrick, Lindsey
Cc: Moore, Kendra; Scott, Paul G; Gilchrist, Brett; Davis, Neil; Thomson, Andrew
Subject: Updated SRKW Note
Attachments: MECTS-#3949687-v6-IN-Southern_Resident_Killer_Whale_Update.docx

FYI... note updated slightly since this morning to include more info on the potential supplementary feeding.

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Southern Resident Killer Whale Update

(August 10, 2018 – 14:15 EDT)

Issue: The rapidly deteriorating health condition of Southern Resident Killer Whale (SRKW) J50 of SRKW J-pod has prompted the U.S. National Oceanic and Atmospheric Administration (NOAA) to propose an emergency action plan to treat her. The response team located J50 on Thursday, August 9th and began sampling and treatment. Additionally, J35 was last seen on Wednesday August 8th travelling with her dead calf.

Update:

- NOAA held their daily media briefing at 10 am PDT to update on J50 and J35. DFO was represented by Andrew Thomson (Resource Management), Sheila Thornton (Science) and Paul Cottrell (Marine Mammal Unit), as well as Dr. Marty Haulena (Veterinarian, Vancouver Aquarium) and Lynne Barre (NOAA).
- Yesterday, Thursday August 9, 2018, the response team located J50 in Canadian waters near Race Rocks area (south of Victoria) and followed her into U.S. waters near San Juan Island.
    - Veterinarian Marty Haulena of the Vancouver Aquarium conducted a health assessment of J50, and the response team obtained a breath sample (to assess for infection) and administered a half a dose of antibiotics via a dart.
    - Yesterday on August 9th, DFO Pacific Region issued to NOAA an authorization to "disturb marine mammals" pursuant to section 38 of the MMR, in addition to provisions under section 52 of the FGR and section 74 of SARA to NOAA.
    - This authorization permits NOAA to conduct sampling of J50, including breath, fecal, mucus and skin; visual veterinary health assessment; and to provide antibiotic treatment via pole syringe or remote delivery.
    - J50's poor body condition was first noted in June and has continued to deteriorate since then. This is a small whale that is very thin.
- NOAA has authorized the nutritional support therapy for J50 in U.S. waters where an initial feeding trial of live wild caught Chinook Salmon (2-4 salmon) would be deployed from a fish delivery vessel approximately 50-100 metres in front of J50 using a funneled chute into the water.
    - The initial trial will depend on the conditions, the location, behaviour of J50 and her pod, as well as J50's response to the deployed fish.
    - This trial will inform the possible implementation of fish containing antibiotics for J50 for further treatment.
- Sound Guardian, a research vessel, was schedule to depart at 6 am PDT from the San Juan Islands area in U.S. waters with reporters onboard and is serving as a safety vessel for response operations for J50. This boat has Chinook Salmon onboard as a backup feeding vessel for J50.
- DFO and NOAA teams continue to survey the area and will conduct health assessments and sampling, including a fecal sample, of J50 if possible.
- J35 has been travelling with her dead calf since its death on July 24, 2018, an unprecedented duration for carrying a calf's carcass. Last seen Wednesday August 8, 2018.
    - At this time J35 has not been reported as having poor body condition. Removing the calf is not being considered, due to the interests of human and animal safety.
    - Despite media questions regarding potential intervention, a permit for J35 is not being considered at this time, but would follow a similar permit process to the one for J50.
- DFO and NOAA vessels are continuing to survey Southern Vancouver Island in search of J pod in bad weather conditions. Conditions are forecasted to be poor into Saturday.

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Khanna, Sukriti

From: Lowe, Carmel
Sent: August-10-18 3:15 PM
To: Kennedy, Eddy; Davis, Neil
Cc: Thornton, Sheila
Subject: FW: Small vessel for MM science program

fyi

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7

Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

From: Lowe, Carmel
Sent: August 10, 2018 3:15 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>; McPherson, Arran <Arran.McPherson@dfo-mpo.gc.ca>; Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>
Subject: RE: Small vessel for MM science program

Andy – I am certain that an additional vessel could be (readily) identified in dept. but the issue is more complex than just a vessel. Trained MM experts are needed and the current DFO teams in area have been on the water for 9 weeks now with almost no weather days and are in need of a break. Add to this that their rental accommodations expire on Aug 11th and getting a booking for additional accommodation at height of tourist season will be both challenging and expensive (see below). The MM experts in the area are scheduled to join the PRISSM survey and others have already moved north to join Sheila on the DTag surveys of the NRKW – both of which are priority activities.

That said, the team has been looking at options and they are captured below

A big issue is $ Regional Science has no funding to support additional monitoring at this time – hence I am including Rebecca, Arran and Sylvie to weigh-in as we will require authorization to risk-manage the costs before proceeding with any of the options noted below.

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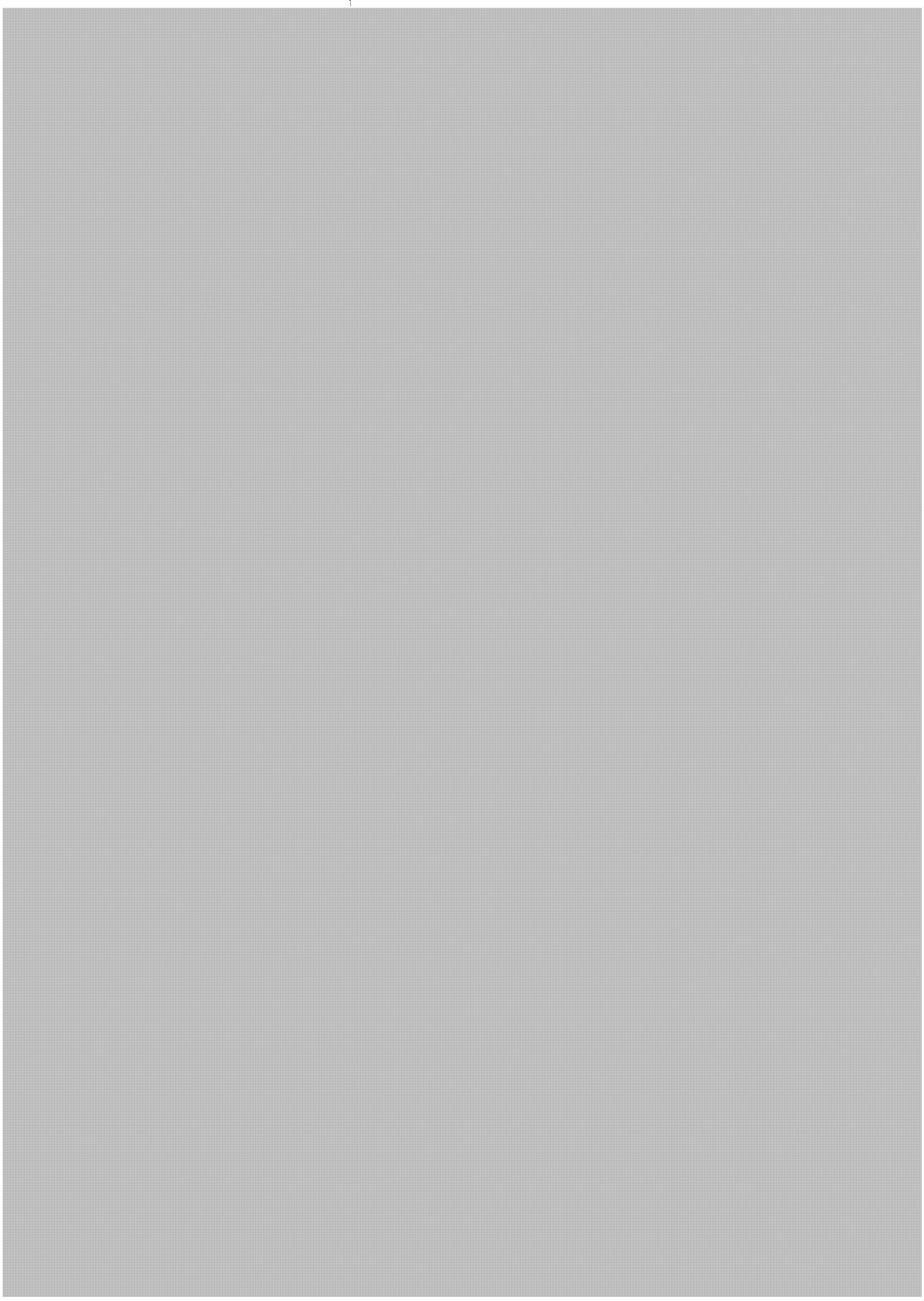
s.21(1)(a)

s.21(1)(b)



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s.21(1)(a)

s.21(1)(b)

[redacted]

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7

Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

From: Thomson, Andrew
Sent: August 9, 2018 9:43 AM
To: Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Cc: Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>
Subject: Small vessel for MM science program

Carmel

I'm concerned about the shortage of a vessel affecting DFO actions for J50. Do you need an alternate vessel?

Is there a need for additional staff to assist?

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
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Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Khanna, Sukriti

From: Brekke, Heather
Sent: August-10-18 11:10 AM
To: Davis, Neil
Subject: RE [redacted]

Hi Neil,

[redacted]

Hope that helps,
Heather

From: Davis, Neil
Sent: August-10-18 10:55 AM
To: Brekke, Heather
Subject: RE: [redacted]

Hi Heather,

[redacted]

From: Brekke, Heather
Sent: Friday, August 10, 2018 9:06 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: RE [redacted]

Hi Neil,

[redacted]

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Let me know if you would like me to do anything further on this, or to standby.

Cheers
Heather

From: Brekke, Heather
Sent: August-09-18 4:52 PM
To: Davis, Neil
Subject: [redacted]

Hi Neil,

[redacted]

Hope that helps,
Heather

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Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

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Mbarushimana, Jenny

From: Davis, Neil
Sent: August-10-18 2:23 PM
To: Thomson, Andrew
Subject: NOAA leadership

Scott Rumsey and Nicolle Hill are the two names I saw on a list of participants in the NOAA comms plan associated w J50. I believe Adam Burns suggested contacting Scott Rumsey

NOAA West Coast Region

Regional Administrator

Barry Thom

Phone: 503.231.6266

Email: [redacted]

Deputy Regional Administrator

Scott Rumsey

Phone: 503.872.2791

Email: [redacted]

Associate Deputy Regional Administrator

Nicolle Hill (acting)

Phone: 206.526.4358

Email: [redacted]

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Khanna, Sukriti

From: Thornton, Sheila
Sent: August-11-18 9:03 AM
To: Cottrell, Paul
Subject: RE: SRKW weekend planning

Nice! Could you keep them there – it gives us a break!

S

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Cottrell, Paul
Sent: August-11-18 9:02 AM
To: Davis, Neil; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise; Higgins, Linda; Demsky, Arthur; Cauffope, Genevieve
Subject: RE: SRKW weekend planning

J-pod located off Eagle Point (San Juan Island) travelling southwest in US Waters. Fog in that area right now.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Cottrell, Paul
Sent: Saturday, August 11, 2018 8:47 AM
To: Davis, Neil; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy;

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Girouard, Louise; Higgins, Linda; Demsky, Arthur; Cauffope, Genevieve
Subject: RE: SRKW weekend planning

Hi All,
Attached is NOAA's summary of their on-water activities yesterday along with a summary of the veterinarian call yesterday. I will update you on any activities today on the Canadian side. J-pod has not yet been located this morning. Expecting windy conditions today, so on water work may be difficult.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Davis, Neil
Sent: Friday, August 10, 2018 3:23 PM
To: Cottrell, Paul; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise; Higgins, Linda
Subject: SRKW weekend planning

Hi all,

Wanted to get a quick update to ensure we are prepared for any events relating to J35 or J50 over the weekend.

I had a chat w Paul C and it sounds like we have a C&P vessel out of Victoria and the MM Response vessel over the weekend, one or both of which can be tasked to support monitoring and sample collection over the weekend if the whales are in Cdn waters. Straitwatch will also be on the water and able to share information. The focus is on collecting a fecal sample. Also had a chat w Carmel and it sounds like Science is assessing options for continued on water presence. I'll let Carmel provide any more info on that once Science is in a position to do so. My suggestion is that if there are updates or there are any kinds of decisions that need to be made, that we share that info with this group. Between us, I suspect we'll have someone close enough to a blackberry to determine what next steps or further information sharing needs to occur. Any other thoughts welcome.

Thx
Neil

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Khanna, Sukriti

From: Kennedy, Eddy
Sent: August-11-18 9:00 AM
To: Cottrell, Paul
Subject: Re: SRKW weekend planning

Thanks Paul. Appreciate the update.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Saturday, August 11, 2018 8:48 AM
To: Davis, Neil; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise; Higgins, Linda; Demsky, Arthur; Cauffope, Genevieve
Subject: RE: SRKW weekend planning

Hi All,
Attached is NOAA's summary of their on-water activities yesterday along with a summary of the veterinarian call yesterday. I will update you on any activities today on the Canadian side. J-pod has not yet been located this morning. Expecting windy conditions today, so on water work may be difficult.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Davis, Neil
Sent: Friday, August 10, 2018 3:23 PM
To: Cottrell, Paul; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise; Higgins, Linda
Subject: SRKW weekend planning

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Thx
Neil

s.16(2)

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Khanna, Sukriti

From: ComApproval / Approbation (DFO/MPO)
Sent: August-11-18 8:09 AM
To: Morel, Philippe; McPherson, Arran; Lapointe, Sylvie
Cc: Burns, Adam; Winfield, Nicholas; Cottrell, Paul; Thomson, Andrew; Wiebe, Robert; Jackson, Ashley; Smith, Kathleen; ComApproval / Approbation (DFO/MPO); Morris, Christina; Northcott, Jennifer; Patzer, Adria; Parkes, Sara; Nasrallah, Christine; Girouard, Louise; Bate, Dan; Sloan, Lara; Eatmon, Keegan; Nesseth, Megan
Subject: FYI - UPDATED media lines SRKW J-50
Attachments: ML_SRKW_J50_August 11 2018-1105- RDG approved.docx

Attached for your information are the latest updated media lines on the situation with J50. The updated media lines have been reviewed and approved by the Regional Director General – Pacific.

Feel free to contact me if you have any questions.
Tina

Christina (Tina) Morris
Manager/Gestionnaire
Ministerial Events and Editorial Services
Department of Fisheries and Oceans/ Pêches et Océans Canada
(613) 993-5983
(613) 8[redacted](cell)
PIN: [redacted]
christina.morris@dfo-mpo.gc.ca

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Media Lines
Southern Resident Killer Whale J50

Issue

The very poor health condition of Southern Resident Killer Whale (SRKW) J50 of SRKW J-pod has prompted the U.S. National Oceanic and Atmospheric Administration (NOAA) to propose an emergency action plan to treat her. Fisheries and Oceans Canada (DFO) is working with NOAA and other scientific partners to determine options for J50. DFO got confirmation on Aug. 8 that J50 was sighted in US waters just north of Douglas Rock/West of Neah Bay. Intense interest in this endangered and high-profile species, whose numbers have dropped to 75 (we do know exactly how many there are), has garnered media and public attention.

Context

J50 is a juvenile female member of the Southern Resident Killer Whale population with a poor body condition. Efforts are underway to collect samples to establish whether she is possibly suffering from infection. Her body condition is comparable with past situations where individuals have died.

Due to the public spotlight on this situation in the media, NOAA drafted several proposals for potential emergency intervention that were shared with DFO late last week to address the body condition of J50, which include a number of options such as : experimental feeding in the wild via a sluice off the back of a boat (Lummi Nation in Washington are currently catching large Chinook for this purpose); inserting oral medications in fish for feeding to J50, injection of medication with a dart; and live penning J50 to enable hydration, feeding, and medication, etc.

NOAA is consulting with several Canadian officials to discuss the condition of J50 and the potential for intervention (on the Canadian side: Sheila Thornton (DFO Science), Paul Cottrell (DFO Marine Mammal Unit), veterinarian Stephen Raverty (Province of BC), and veterinarian Marty Haulena (Vancouver Aquarium). DFO Pacific has issued a permit (August 9) to allow US officials to treat J50 with injection of medication with a dart.

NOAA is holding daily media briefings at 10am Pacific. Paul Cottrell and Sheila Thornton and Andy Thompson are participating on DFO/Canada's behalf. NOAA will continue to hold daily briefings as needed.

Given the limited number of females in such a small population, it would be a significant loss to the population to lose this individual.

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Media Lines

- The very poor health condition of Southern Resident killer whale J50 of the J-pod is extremely concerning to all of us and warrants immediate action. J50's fragile state is particularly trying for Canadians, Americans and Indigenous Peoples given the state of the whale population and the whale's cultural significance.

- On Thursday August 9th, DFO located J50 and an observation team from both sides of the border was mobilized. This included Head Veterinarian from the Vancouver Aquarium Dr. Marty Haulena. The team was able to observe J50 for approximately 6 hours, and Dr. Haulena was able to make some valuable observations including respiratory rate, swimming activity, as well as collecting a breath sample and administering a long-acting broad spectrum antibiotic via dart injection.

- The team will continue to observe J50 over the weekend for potential reactions to the antibiotic and to collect fecal samples for further diagnostic tests. Results from breath and fecal samples will take up to a week for results.

- We are working closely with NOAA to consider every possible option available to us to save this whale. Our decisions will be evidence-based and we will again act quickly together with our partners when the conditions are right to move ahead with any action. These conditions include: weather, location, the whale's health, the unknown condition we are treating and the impacts of these actions on other members of the population

- We are looking carefully at the options that have been proposed to date. As there are only 75 Southern Resident killer whales left, we must take into consideration whether our actions risk harming either J50 or her pod. We will be ready to respond quickly should the intervention need to occur in Canadian waters.

- DFO issued a permit to allow US researchers to take breath, fecal, and mucous samples and treat J50 with medication by injection when the whale is located in Canadian waters.

If pressed on options:

- We are looking carefully at the options that have been proposed to date. As there are only 75 Southern Resident killer whales left, we must take into consideration whether our actions risk harming either J50 or her pod.

- Some of the options that have been proposed include: experimental feeding in the wild, inserting oral medications in fish for feeding to J50, injecting medication with a dart; and live penning the whale to enable hydration, feeding, and medication, etc.

- The social/familial impact to J-pod if J50 were to be captured and penned would be significant. As demonstrated by J35, these animals form significant bonds with their kin, and removing a juvenile, even just for a short time, could have serious repercussions. (Statement from Sheila Thornton on Aug 9 press call.)

- Our science team has significant concerns about feeding, given the risks of disturbance and habituation for J50 and the entire J pod. If we do get a request to permit this in Canadian waters, further assessment will be required.

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If pressed on J35

- Our marine mammal experts last sighted J35 with the pod on August 9 and is still carrying her calf.
- The loss of any calf to the Southern Resident Killer whale population has a significant impact on population recovery.
- Over the last 6 weeks, DFO scientists have identified 75 individuals from the SRKW population around Southern Vancouver Island. J35's calf was the only calf that has been spotted this year.
- DFO scientists are collecting samples to support a comparison of fecal hormones to identify whether SRKW pregnancy loss is significantly higher than what is experienced in the NRKW population. Preliminary data from this field study will likely be available in late 2019.

About the South Resident killer whales

- Southern Resident killer whales are an endangered, specialized population of killer whales that now number 75, the lowest in decades. Female whales are especially valuable to the population given their reproductive potential.

- The Government of Canada is committed to protecting the iconic and, culturally and ecologically significant Southern Resident killer whale and is taking actions to protect and recover the species.

Actions to date

We have taken and continue to take concrete action to protect Southern Resident Killer Whales, such as:

- Full closures for recreational finfish and commercial salmon fisheries in the Strait of Juan de Fuca and the Gulf Islands, plus partial closures for the mouth of the Fraser River to protect key foraging areas for the whales.
- Coastwide fishing restrictions to reduce harvest of key chinook salmon stocks by 25-35% in northern and southern B.C., a key prey species for SRKW.
- New regulations that prohibit vessels from approaching Southern Resident Killer Whales closer than 200m—this will help minimize noise disturbance and allow the whales to feed more easily.
- New investments in Science to better understand the whale population and the effectiveness of our recovery measures.

Questions and Answers

Fisheries and Oceans Canada received a proposed rescue plan from NOAA on August 3rd - what is involved in reviewing this plan and how long will it take before the Government of Canada can determine if it can be put in action in Canadian waters?
The first step before taking any action is to more fully assess the potential causes of J50's condition. If conditions are right to move ahead with a treatment, DFO and NOAA will work to together to treat the whale.

Would the Government of Canada require a permit to allow for the feeding of the orca?Our science team has significant concerns about feeding, given the risks of disturbance and habituation for J50 and the entire J pod. If we do get a request to permit this in Canadian waters, further assessment will be required.

Don't the Marine Mammal Regulations prohibit feeding whales?

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While it is true that under the MMRs feeding and disturbing whales is not allowed, the Regulations note that the activity is permitted if it is in the manner authorized by the *Species At Risk Act.*

Q. If conditions are favourable and NOAA attempts providing J50 with a treatment/feeding, what role(if any) would there be for DFO?
DFO continues to support NOAA throughout this situation. We have experts on the water sighting the whales and our experts have reviewed the NOAA proposal which outlines different potential courses of action. If J50 remains in American waters we will continue to provide this supportive role.

DFO received and has already issued an application for a permit from the U.S. for a treatment to proceed in Canadian waters.

We are looking carefully at the options that have been proposed to date. As there are only 75 Southern Resident killer whales left, we must take into consideration whether our actions risk harming either J50 or her pod. We will be ready to respond quickly should the treatment need to occur in Canadian waters.

We will continue to provide support as needed by NOAA both on the water and off.

Spokespersons:
Status of licensing, Proposal from NOAA, Measures we are taking to protect SRKW
Andrew Thomson

Condition of J50, Science, Obligations under SARA
Sheila Thornton, Lead Killer Whale Research Scientist, 604-364-5917

Monitoring for J-pod, mechanics of the operation if we can intervene
Paul Cottrell, Marine Mammal Coordinator, 604-666-9965

Program Contact:
Paul Cottrell, Marine Mammal Coordinator, 604-666-9965
Sheila Thornton, Lead Killer Whale Research Scientist, 604-364-5917

Communications Contact:
Janine Malikian, Pacific Region, 604-666-6766
Lara Sloan, Pacific Region, 250-363-3749

s.19(1)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-11-18 10:28 PM
To: Davis, Neil; Thomson, Andrew; Thornton, Sheila; Lowe, Carmel; Girouard, Louise; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Higgins, Linda; Demsky, Arthur; Cauffope, Genevieve
Subject: FW: Daily Debrief - Saturday, August 11th - J50 Encountered Again

Hi All,
Below is the NOAA summary of activities as they were on-water with J-pod in US waters.
Cheers,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Kristin Wilkinson - NOAA Federal [redacted]
Sent: Saturday, August 11, 2018 10:14 PM
To: Katy Foster; Brad Hanson (NOAA Federal); Holly Fearnbach; [redacted] John Durban - NOAA Federal; Teri Rowles; Lynne Barre - NOAA Federal; Marty Haulena; Deborah Giles; Michael Milstein - NOAA Federal; Scott Rumsey - NOAA Federal; Mark Strom - NOAA Federal; Ruth Howell; Mike Ford; Jim Milbury - NOAA Federal; Barry Thom - NOAA Federal; Thornton, Sheila; Chris Yates - NOAA Federal; Forbes Darby - NOAA Federal; Kate Naughten; John Ewald - NOAA Federal; Becker, Penny A (DFW); Cottrell, Paul; Teresa Mongillo; Amilee Wilson - NOAA Federal; Jennifer Ise - NOAA Federal; Emma Htun - NOAA Federal; Samantha Guidon - NOAA Federal; Katherine Brogan - NOAA Affiliate; Jennie Lyons; Deborah Fauquier; jeff foster; Sarah Mesnick; Director Marine Mammal; Kevin Werner - NOAA Federal; Joseph Karl Gaydos; [redacted]; Jim McBain; Kimball, Taylor P (DFW)
Subject: Daily Debrief - Saturday, August 11th - J50 Encountered Again

Hello Everyone -

NWFSC and UW were on the water today with J50.

Sample collection: UW was able to collect a small fecal sample from J50's immediate pod today but cannot say with certainty that it is from J50. The sample is too small for the analysis (cytology, microbiology, parasitology,

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etc.) we would need to do to be performed. The sample will be frozen and sent to Sam Wasser's lab at UW for analysis but it will not be used for J50's case. NWFSC did not collect any samples today (breath, fecal, etc.).

Behavior: When UW was on scene J50 was keeping up with her pod members in a tight flanked directional travel and then later observed in a modified resting state. NWFSC was later on scene with her for 5 hours and noted J50 quickly fell behind in a very strong tidal current and remained stationary in the strong current for ~ 1hr. The tide changed and she began to pick up speed but she did not porpoise along with the other animals and when NWFSC left the scene she was 1km behind the pod.

Foraging: There was a report from a charter company of J50 catching a fish today, the response team is following up for more information. NWFSC did not see evidence of J50 feeding during their time with her even while in prime foraging habitat.

New goals: Dr. Stephen Raverty will be leading an effort to write and prepare a fecal sampling protocol for the on water teams. We will also be working to identify additional sources for UAS capacity for the next week.

J35: Center for Whale Research said that J35 was seen today without her calf.

All for now,

Kristin

s.19(1)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-11-18 9:11 AM
To: Higgins, Linda
Subject: RE: SRKW weekend planning

Thanks Linda, CP's efforts on this have been great. Crazy times :)

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Higgins, Linda
Sent: Saturday, August 11, 2018 9:09 AM
To: Cottrell, Paul
Subject: Re: SRKW weekend planning

Thanks Paul [redacted]

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Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

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To: Cottrell, Paul; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise; Higgins, Linda
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Thx
Neil

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-11-18 9:30 PM
To: Davis, Neil; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise; Higgins, Linda; Demsky, Arthur; Cauffope, Genevieve
Subject: RE: SRKW weekend planning

Hi All,
Just wanted to update you that J-pod was for the most part in US waters today and the last update was j-pod was off San Juan Island in the US. I will keep you posted on any updates tomorrow on J-pods location.
Best,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Cottrell, Paul
Sent: Saturday, August 11, 2018 9:01 AM
To: Davis, Neil; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise; Higgins, Linda; Demsky, Arthur; Cauffope, Genevieve
Subject: RE: SRKW weekend planning

J-pod located off Eagle Point (San Juan Island) travelling southwest in US Waters. Fog in that area right now.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

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Vancouver, BC

V6C 3S4

(604) 666-9965

From: Cottrell, Paul
Sent: Saturday, August 11, 2018 8:47 AM
To: Davis, Neil; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise; Higgins, Linda; Demsky, Arthur; Cauffope, Genevieve
Subject: RE: SRKW weekend planning

Hi All,
Attached is NOAA's summary of their on-water activities yesterday along with a summary of the veterinarian call yesterday. I will update you on any activities today on the Canadian side. J-pod has not yet been located this morning. Expecting windy conditions today, so on water work may be difficult.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Davis, Neil
Sent: Friday, August 10, 2018 3:23 PM
To: Cottrell, Paul; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise; Higgins, Linda
Subject: SRKW weekend planning

Hi all,

Wanted to get a quick update to ensure we are prepared for any events relating to J35 or J50 over the weekend.

I had a chat w Paul C and it sounds like we have a C&P vessel out of Victoria and the MM Response vessel over the weekend, one or both of which can be tasked to support monitoring and sample collection over the weekend if the whales are in Cdn waters. Straitwatch will also be on the water and able to share information. The focus is on collecting

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a fecal sample. Also had a chat w Carmel and it sounds like Science is assessing options for continued on water presence. I'll let Carmel provide any more info on that once Science is in a position to do so. My suggestion is that if there are updates or there are any kinds of decisions that need to be made, that we share that info with this group. Between us, I suspect we'll have someone close enough to a blackberry to determine what next steps or further information sharing needs to occur. Any other thoughts welcome.

Thx
Neil

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s.19(1)

Khanna, Sukriti

From: Cottrell, Paul
Sent: August-27-18 7:25 AM
To: Yurk, Harald; Kennedy, Eddy
Subject: RE: Tracking J-pod using WTN

Thanks Harald,
I have been tracking J, k and l pods all summer on-water because of J35 and J50 so know their daily whereabouts if they were located. Hydrophones have been very useful, especially because of the smoke/fog. [redacted] has been very helpful in the off-shore areas locating J, K, and L.
Cheers,
Paul

From: Yurk, Harald
Sent: August-26-18 9:35 PM
To: Cottrell, Paul; Kennedy, Eddy
Subject: RE: Tracking J-pod using WTN

Hi Eddy, Paul

Thanks for the update on the WTN, Paul. We are still in the process of determining how much money will be in this year's LMCAS budget to support the WTN. Unfortunately, we have not received all cost items yet but hope that will happen soon.

As was the case last year, SRKW spent this summer a fair amount of time in either the Western part of the Salish Sea, in western Juan de Fuca Strait, or outside of the Salish Sea. For example, I encountered K and L pod Northwest of Carmanah last week but also about more than a mile offshore. We need definitely expand our detection networks to get a better handle on where SRKW are when they are not in the Gulf Islands and we will start testing technologies that can help us detecting whales when they are further offshore.

Harald

From: Cottrell, Paul
Sent: 2018–August-25 8:25 AM
To: Kennedy, Eddy; Yurk, Harald
Subject: Re: Tracking J-pod using WTN

Hi Eddy,
The KW tracking network has been very useful in tracking when southern residents are in the Gulf Islands. Unfortunately there has been no funding this year so many of the stations (eg Sandheads off YVR airport, Sheringham off Sooke/Jordan River) are offline as they need hydrophone replacements and maintenance. It has been very disappointing. I'm hoping we get funding as the tracking network stations which are off-line would have been very useful in locating SRKW and J50 this year.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Kennedy, Eddy

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Sent: Saturday, August 25, 2018 7:29 AM
To: Cottrell, Paul; Yurk, Harald
Subject: Tracking J-pod using WTN

Paul and Harald,
As you know over the past few weeks a lot of effort has gone into trying to locate J-pod and specifically J50. I was wondering if we are using the WTN in these activities and what is the utility of the system in locating whales that we want to track? I realise we likely can't get to identifying an individual, but knowing orcas are in a particular area would help.
Just curious

Sent from my BlackBerry 10 smartphone on the Rogers network.

s.19(1)

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Khanna, Sukriti

From: [redacted]
Sent: August-12-18 8:51 AM
To: Girouard, Louise; Cottrell, Paul; Bate, Dan
Subject: After 17 days and 1,000 miles, mother orca Tahlequah drops her dead calf | The Seattle Times

https://www.seattletimes.com/seattle-news/environment/after-17-days-and-1000-miles-mother-orca-tahlequah-drops-her-dead-calf/

After 17 days and 1,000 miles, mother orca Tahlequah drops her dead calf

Lynda V. MapesOriginally published August 11, 2018 at 8:39 pm

Tahlequah, the mother orca whale whose plight captivated people around the world, is no longer carrying her calf.

Tahlequah the mother orca is no longer carrying her dead calf.

"J35 frolicked past my window today with other J pod whales, and she looks vigorous and healthy," Ken Balcomb, founding director of the Center for Whale Research, wrote in an email to The Seattle Times. "The ordeal of her carrying a dead calf for at least seventeen days and 1,000 miles is now over, thank goodness."

J35, also known as Tahlequah, is part of the critically endangered southern-resident killer-whale population. Balcomb said J35 probably has lost two other offspring since giving birth to a male calf in 2010.

The loss of the most recent calf "may have been emotionally hard on her," Balcomb said. "She is alive and well and at least over that part of her grief. Today was the first day that I for sure saw her. It is no longer there."

J35 showed no signs of "peanut head," a condition that betrays malnutrition in an orca, as cranium bones begin to show. "She's been eating," Balcomb said.

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People around the world were moved by the plight of the southern residents as Tahlequah carried her dead baby, a female, day after day.

Another member of the population, a 4 ½ year-old known as J50, also is ailing. Biologists were working over the weekend to monitor her condition.

The Lummi Nation also is standing by to feed J50 live salmon, possibly as soon as Sunday.

A veterinary review of J50 on Thursday night encouraged veterinarians and biologists who said her condition is better than they expected. But she remains terribly thin and severely malnourished.

Lack of food also has been linked to the southern residents' failure for three years now to produce offspring.

"The reason J35 lost her baby and the others are losing their babies is there is not enough salmon," Balcomb said of the whales' primary food source. "Hopefully we will do something about that."

It is possible that rather than Tahlequah deciding to drop the baby, it simply finally fell apart. When the calf was sighted last Thursday, it was beginning to deteriorate.

Tahlequah had emphatically clung to the calf, diving deeply to retrieve the calf each time it slid from her head.

Biologists tracking her worried she might not be getting anything to eat, and might also be slipping into danger.

At 20, Tahlequah is an extraordinarily valuable member of the critically-endangered southern-resident clan, potentially with years of reproductive potential ahead of her. If she can get enough to eat.

Scientific research has shown that at least three problems are causing the decline of the southern-resident clan, in the J, K, and L pods of orca whales.

Vessel noise interrupts their foraging behavior. Toxins are released from their blubber when they burn their fat because they are hungry. And malnutrition in a top predator that needs to swim 75 miles a day is a devastating blow. Hunger makes their other problems worse.

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Tahlequah's behavior was not unusual. Orcas, dolphins and other mammals, including gorillas, are known to carry their deceased youngin what is widely understood by scientists to be an expression of grief.

But Tahlequah's witness was extraordinary in its duration — unprecedented among documented examples.

Sheila Thornton, lead killer-whale biologist for Fisheries and Oceans Canada, said strong social bonds between the families of orcas drive much of their behavior. The southern residents share food, a common language, a culture of eating only fish and an ecological knowledge of where to find it in their home range.

Today, with only 75 members left in the southern-resident clan, the question is what now will be done to save them from extinction.

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-12-18 10:16 AM
To: Davis, Neil
Subject: Re: Media Release: J35 Update

For sure! Just heard NOAA may not be on the water today, don't know why yet. Will keep you posted. Straitwatch with J-pod now in US waters.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Davis, Neil
Sent: Sunday, August 12, 2018 10:11 AM
To: Cottrell, Paul
Subject: RE: Media Release: J35 Update

thanks for teh update Paul, good to hear that J35 may have let go of her calf

---

From: Cottrell, Paul
Sent: August 12, 2018 9:58 AM
To: Davis, Neil; Thomson, Andrew; Thornton, Sheila; Lowe, Carmel; Girouard, Louise; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Higgins, Linda; Cauffope, Genevieve; Sloan, Lara
Subject: RE: Media Release: J35 Update

J-pod is currently in US waters off Henry Island and Mitchell Bay. NOAA indicated they may try live feeding trials (no medication just live chinook release) today if the weather and the location of J50 relative to the chinook release vessel works out. I'll keep you posted.
Cheers,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

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s.19(1)

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From: Cottrell, Paul
Sent: Sunday, August 12, 2018 9:14 AM
To: Davis, Neil; Thomson, Andrew; Thornton, Sheila; Lowe, Carmel; Girouard, Louise; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Higgins, Linda; Cauffope, Genevieve; Sloan, Lara
Subject: FW: Media Release: J35 Update

Hi All,
Fyi, Center for Whale research has released a press release that J35 is no longer carrying her calf and has been seen feeding and active (see below). Strait watch crew thought they may have seen J35 still carrying her calf yesterday but we will confirm today. The DFO killer whale tracking network hydrophones indicate KW's are not in Boundary Pass, Active Pass or North Pender. The hydrophone at Lime Kiln in the US has picked up J-pod calls this morning so they are likely still in US waters. I'll keep you posted on sightings/location information.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Center for Whale Research [redacted]
Sent: Sunday, August 12, 2018 7:46 AM
To: Cottrell, Paul
Subject: Media Release: J35 Update

Can't See This Message? **View in a browser**

"The ordeal of J35 carrying her dead calf for at least seventeen days and 1,000 miles is now over, thank goodness."
- Ken Balcomb, Center for Whale Research

This afternoon at 1407 Pacific Daylight Time, J35 vigorously chased a school of salmon with her pod-mates in mid-Haro Strait in front of the Center for

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Whale Research for a half mile - no longer carrying the deceased baby that she had carried for at least seventeen days and 1,000 miles. Her tour of grief is now over, and her behavior is remarkably frisky. Telephoto digital images taken from shore show that this mother whale appears to be in good physical condition (no evidence of "peanut-head") following her record-setting ordeal. *There had been reports from brief sightings by whale-watchers two days ago* that J35 (Tahlequah) was not pushing the calf carcass in Georgia Strait near Vancouver, BC; and, now we can confirm that she definitely has abandoned it. The carcass has probably sunk to the bottom of these inland marine waters of the Salish Sea, and researchers may not get a chance to examine it for necropsy.
Link to webpage

Telephoto digital images taken from shore show that this mother whale appears to be in good physical condition (photographs by Ken Balcomb, Center for Whale Research).
Please note these are the highest resolution photos available at this time (link to download images).

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The Center for Whale Research is dedicated to the study and conservation of the Southern Resident killer whale (orca) population in the Pacific Northwest. With only 75 Southern Resident orcas remaining, there is a greater need than ever before to speak out on their behalf.

Center for Whale Research
355 Smugglers Cove Road
Friday Harbor, San Juan Island, Washington
United States 98250
Email: info@whaleresearch.com

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WhaleResearch.com

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s.21(1)(a)

s.21(1)(b)

Mbarushimana, Jenny

From: Murray, Cathryn
Sent: August-13-18 11:14 AM
To: MacDougall, Lesley; Shaikh, Sharlene; Locke, Andrea; Hannah, Lucie; Grant, Paul; MacConnachie, Sean; Jones, Lisa Ann; Brekke, Heather; Leslie, Karen; Chamberlain, Jon; Doniol-Valcroze, Thomas; Johannessen, Sophia; Whelan, Christie
Cc: Govender, Rhona; Brekke, Heather
Subject: RE: draft Terms of Reference - RKW CEA
Attachments: DRAFT_TOR_RPR_Cumulative effects RKW_9aug18_LM_SS_CM.docx

Hi Lesley,

Sharlene and I have incorporated your revisions and made some more changes. See attached.

[redacted]

Let us know what you think of the changes and we can have another round of edits.

Cheers,
Cathryn

From: MacDougall, Lesley
Sent: 2018–August-09 4:45 PM
To: Shaikh, Sharlene; Murray, Cathryn; Locke, Andrea; Hannah, Lucie; Grant, Paul; MacConnachie, Sean; Jones, Lisa Ann; Brekke, Heather; Leslie, Karen; Chamberlain, Jon; Doniol-Valcroze, Thomas; Johannessen, Sophia; Whelan, Christie
Cc: Govender, Rhona; Brekke, Heather
Subject: RE: draft Terms of Reference - RKW CEA

Thanks Sharlene – you and Cathryn had incorporated some of the changes I was thinking of already!

[redacted]

My suggestions attached.
Thanks again all;
Lesley

From: Shaikh, Sharlene
Sent: 2018–August-08 2:53 PM
To: MacDougall, Lesley; Murray, Cathryn; Locke, Andrea; Hannah, Lucie; Grant, Paul; MacConnachie, Sean; Jones, Lisa Ann; Brekke, Heather; Leslie, Karen; Chamberlain, Jon; Doniol-Valcroze, Thomas; Johannessen, Sophia; Whelan, Christie
Cc: Govender, Rhona; Brekke, Heather
Subject: draft Terms of Reference - RKW CEA

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Hi everyone,

In case you did not receive the document I sent this morning, please find it attached. Apologies for the duplication if you did!

[redacted]

For any CE-related items, please cc- Rhona Govender and Heather Brekke, the SARA Marine Team Lead, on future correspondence.

Best wishes,
Sharlene

Sharlene Shaikh
Biologist, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
sharlene.shaikh@dfo-mpo.gc.ca
Tel: 604-666-3811

s.21(1)(a)

s.21(1)(b)

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Terms of Reference

Cumulative Effects Assessment for Northern and Southern Resident Killer Whale Populations

Regional Peer Review Process – Pacific Region

March 2019 (3 day)

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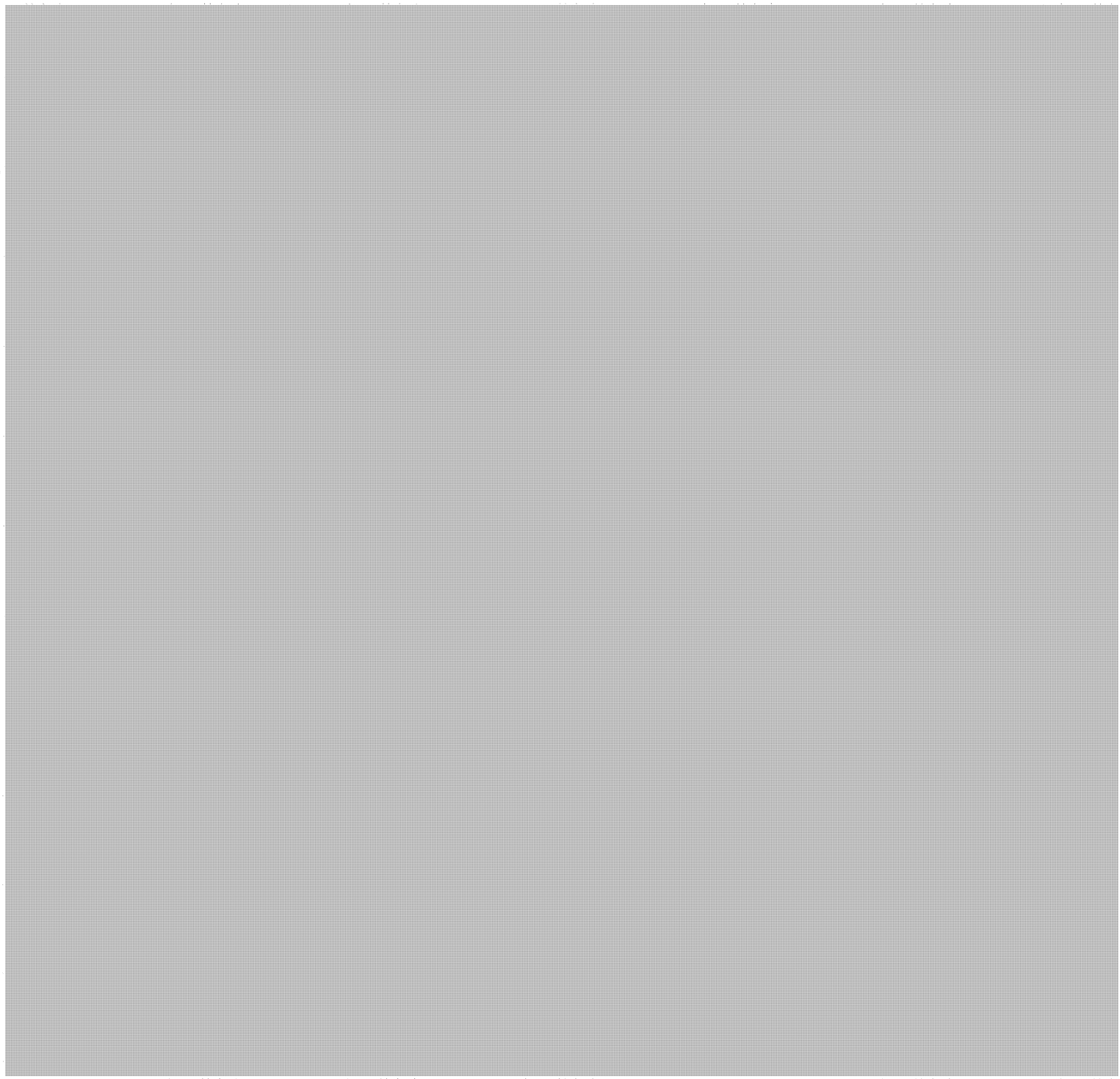
s.21(1)(a)

s.21(1)(b)



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s.21(1)(a)

s.21(1)(b)

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s.21(1)(a)

s.21(1)(b)

Client Contacts

- Sharlene Shaikh
- Lisa Ann Jones
- Heather Brekke

DRAFT

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Khanna, Sukriti

From: Brekke, Heather
Sent: August-13-18 9:32 AM
To: Shaikh, Sharlene
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

I can work on it from here.

From: Shaikh, Sharlene
Sent: August-13-18 9:30 AM
To: Brekke, Heather
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Okay that's what I thought then ☺ Can you confirm when you need this by? I'll schedule my coffee/ chat on contaminants around it this am!

From: Brekke, Heather
Sent: August-13-18 9:28 AM
To: Shaikh, Sharlene
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Yes – it needs to be written out.

From: Shaikh, Sharlene
Sent: August-13-18 9:28 AM
To: Brekke, Heather
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hiya,

Does the response below need to be further developed this am?

Sharlene

From: Brekke, Heather
Sent: August-10-18 4:22 PM
To: Shaikh, Sharlene; Jones, Lisa Ann
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Great – thanks both ☺

From: Shaikh, Sharlene
Sent: August-10-18 4:22 PM
To: Brekke, Heather; Jones, Lisa Ann
Cc: Kenyon, Robyn
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hi Heather,

Just had a quick chat with Lisa and we jotted down some ideas/ themes for a response to #2:

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[redacted]

Happy to help jot down a response on Monday am.

Cheers,
Sharlene

From: Brekke, Heather
Sent: August-10-18 3:57 PM
To: Jones, Lisa Ann; Shaikh, Sharlene
Cc: Kenyon, Robyn
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi Lisa and Sharlene,

Do we have some canned language from the responses that we can use to speak to #2? Sharlene, you and I can coordinate this response on Monday morning, but Lisa please take a quick look before you head out today and let me know if you have any suggestions.

Robyn – we can handle this one unless you have anything to contribute, and will run it by Jennifer.

Cheers
Heather

From: Fogliato, Cara
Sent: August-10-18 3:44 PM
To: Silverstein, Adam; Chestnut, Tina; Brekke, Heather; Kenyon, Robyn
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Good afternoon all,

EMB has been asked to provide input for a meeting recommendation for the Minister. The incoming letter is coming

[redacted]

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[redacted] Could you please submit your input to me by 1:00pm Monday August 13th for RD approval.

Thank you,

Mark Johal on behalf of:

Cara Fogliato
Executive Assistant to Regional Director, Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Cara.Fogliato@DFO-mpo.gc.ca / Tel: 604-666-6285

From: Barton, Meagan
Sent: August-10-18 3:26 PM
To: Webb, Cheryl; Murdoch, Sarah; Nener, Jennifer; Lamont, Averil
Cc: Negosu, Paula; Fogliato, Cara; Lawrie, Kirsten
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi there,

Sorry for the late notice. This task is due early next week. [redacted] will be the lead and will require your input. Please submit your input to the [redacted]

Thank you so much
Eva on behalf of Meagan

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Barton, Meagan
Sent: August-10-18 11:43 AM
To: Nener, Jennifer
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

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Hi Jennifer,

[redacted]

Thanks

Eva

[redacted]

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Church, Ashley
Sent: August-10-18 11:13 AM
To: Barton, Meagan
Cc: Lawrie, Kirsten
Subject: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi Ladies,

The following docket is for processing for the Minister

Lead: PAC - FM
Input Required From: PAC-Policy
GCCMS #: 2018-001-01585
Routed to FM and Policy in GCCMS

[redacted]

The following information will need to be included in your response:

- completed "Recommendation Template" indicating whether the Minister should attend/meet (**Y/N**)
- up to 3 bullets of context/background info for the recommendation
- the completed approval form

[redacted]

If you believe your group should not take the lead/provide input on this docket, please advise me immediately.

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Please submit your documents to RDGO no later than August 13th, COB.

Thank you,

Ashley Church
Correspondence Officer | Agente de correspondance
Regional Director General's Office/Bureau Directeur Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Telephone | Téléphone (604) 666-3303
Ashley.Church@dfo-mpo.gc.ca

From: Godby, Leah
Sent: August-10-18 7:52 AM
To: Church, Ashley
Cc: Langton, Erin; Mostowich, Kyla
Subject: FOR INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hello,

Please provide input for this recommendation by **COB August 14, 2018**

The following information will need to be included in your response:

- completed "Recommendation Template" indicating whether the Minister should attend/meet (**Y/N**)
- up to 3 bullets of context/background info for the recommendation
- the completed approval form
    - Please let MCU know if further approvals are needed. For example, ADM

If you need to request a **lead change**, **contact MCU immediately**. Please do not wait until the recommendation is due or late.

Please note: Should input from multiple sectors, directorates and/or regions be required, the MCU designated lead will be responsible for obtaining contributions.

Thank you for your assistance with this docket,

Leah Godby
A/Senior Analyst, Ministerial Correspondence Unit
Fisheries and Oceans Canada / Government of Canada
Leah.Godby@dfo-mpo.gc.ca / Tel: 613-991-6932

Analyste principal, Unité de la correspondance ministérielle
Pêches et Océans Canada / Gouvernement du Canada
Leah.Godby@dfo-mpo.gc.ca / Tel: 613-991-6932

MCCU Analysts/Analystes: XNCR-GrpCA/AC@dfo-mpo.gc.ca
MCCU Writers/Redacteurs: XNCR-GrpCW/RC@dfo-mpo.gc.ca

s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Brekke, Heather
Sent: August-13-18 10:27 AM
To: Fogliato, Cara
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Attachments: MECTS-#3951148-v1-Recommendation_2018-001-01585_hb.docx

Hi Mark,

Please see attached.

Best
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

From: Fogliato, Cara
Sent: August-13-18 9:39 AM
To: Brekke, Heather
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Good morning Heather,

For this recommendation, please use the template when providing input.

Thank you,

Mark Johal on behalf of:

Cara Fogliato
Executive Assistant to Regional Director, Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Cara.Fogliato@DFO-mpo.gc.ca / Tel: 604-666-6285

From: Brekke, Heather
Sent: August-13-18 9:36 AM
To: Fogliato, Cara
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Hi Cara,

Can you confirm whether you would like a response to item 2 via email (i.e. a statement), or if you require this in the attached template?

Thanks
Heather

From: Fogliato, Cara
Sent: August-10-18 3:44 PM
To: Silverstein, Adam; Chestnut, Tina; Brekke, Heather; Kenyon, Robyn
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Good afternoon all,

EMB has been asked to provide input for a meeting recommendation for the Minister. The incoming letter is coming Could you please submit your input to me by 1:00pm Monday August 13th for RD approval.

Thank you,

Mark Johal on behalf of:

Cara Fogliato
Executive Assistant to Regional Director, Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Cara.Fogliato@DFO-mpo.gc.ca / Tel: 604-666-6285

From: Barton, Meagan
Sent: August-10-18 3:26 PM
To: Webb, Cheryl; Murdoch, Sarah; Nener, Jennifer; Lamont, Averil
Cc: Negosu, Paula; Fogliato, Cara; Lawrie, Kirsten
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Hi there,

Sorry for the late notice. This task is due early next week. [redacted] will be the lead and will require your input. Please submit your input to the [redacted]

Thank you so much
Eva on behalf of Meagan

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Barton, Meagan
Sent: August-10-18 11:43 AM
To: Nener, Jennifer
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi Jennifer,

[redacted]

Thanks

Eva

[redacted]

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Church, Ashley
Sent: August-10-18 11:13 AM
To: Barton, Meagan

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s.21(1)(a) s.21(1)(b)

Cc: Lawrie, Kirsten
Subject: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi Ladies,

The following docket is for processing for the Minister

Lead: PAC - FM
Input Required From: PAC-Policy
GCCMS #: 2018-001-01585
Routed to FM and Policy in GCCMS

[redacted]

The following information will need to be included in your response:

- completed "Recommendation Template" indicating whether the Minister should attend/meet (**Y/N**)
- up to 3 bullets of context/background info for the recommendation
- the completed approval form

[redacted]

If you believe your group should not take the lead/provide input on this docket, please advise me immediately.

Please submit your documents to RDGO no later than August 13th, COB.

Thank you,

Ashley Church
Correspondence Officer | Agente de correspondance
Regional Director General's Office/Bureau Directeur Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Telephone | Téléphone (604) 666-3303
Ashley.Church@dfo-mpo.gc.ca

From: Godby, Leah
Sent: August-10-18 7:52 AM
To: Church, Ashley
Cc: Langton, Erin; Mostowich, Kyla
Subject: FOR INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hello,

Please provide input for this recommendation by **COB August 14, 2018**

[redacted]

The following information will need to be included in your response:

- completed "Recommendation Template" indicating whether the Minister should attend/meet (**Y/N**)
- up to 3 bullets of context/background info for the recommendation
- the completed approval form
    - Please let MCU know if further approvals are needed. For example, ADM

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If you need to request a **lead change**, **contact MCU immediately**. Please do not wait until the recommendation is due or late.

Please note: Should input from multiple sectors, directorates and/or regions be required, the MCU designated lead will be responsible for obtaining contributions.

Thank you for your assistance with this docket,

Leah Godby
A/Senior Analyst, Ministerial Correspondence Unit
Fisheries and Oceans Canada / Government of Canada
Leah.Godby@dfo-mpo.gc.ca / Tel: 613-991-6932

Analyste principal, Unité de la correspondance ministérielle
Pêches et Océans Canada / Gouvernement du Canada
Leah.Godby@dfo-mpo.gc.ca / Tel: 613-991-6932

MCCU Analysts/Analystes: XNCR-GrpCA/AC@dfo-mpo.gc.ca
MCCU Writers/Redacteurs: XNCR-GrpCW/RC@dfo-mpo.gc.ca

Pages 2769 to / à 2772

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

s.21(1)(a)
s.21(1)(b)
s.23

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Dozie, Juachi

From: Brekke, Heather
Sent: August-13-18 9:31 AM
To: Davis, Neil
Subject: Summary of changes to RKW aRS re CH

Hi Neil,

[redacted]

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s.19(1)
s.21(1)(a)
s.21(1)(b)

Dozie, Juachi

From: Brekke, Heather
Sent: August-13-18 2:52 PM
To: Shaikh, Sharlene
Subject: RE: On the West Coast

Lauren?

From: Shaikh, Sharlene
Sent: August-13-18 2:51 PM
To: Brekke, Heather
Subject: RE: On the West Coast

Do you have a person in aquaculture you would recommend sending this to?

From: Brekke, Heather
Sent: August-13-18 2:51 PM
To: Shaikh, Sharlene
Subject: RE: On the West Coast

[redacted]

From: Shaikh, Sharlene
Sent: August-13-18 2:50 PM
To: Brekke, Heather
Subject: FW: On the West Coast

[redacted]

From: [redacted]
Sent: August-13-18 2:49 PM
To: Shaikh, Sharlene
Subject: RE: On the West Coast

Sharlene: Then why continue to commit to Aquaculture and Farmed Salmon on the West Coast? The Wild Species is all round more valuable to the ecology and to jobs and tourism. The inconsistency is very suspicious as to the motives of DFO and the Liberal Government. [redacted]

From: Shaikh, Sharlene [mailto:Sharlene.Shaikh@dfo-mpo.gc.ca]
Sent: Monday, August 13, 2018 2:18 PM
To: [redacted]
Subject: RE: On the West Coast

Dear [redacted]

Thank you for your email expressing concern for known and potential threats that killer whales in Canadian Pacific waters face. The Government of Canada released a statement in May 2018 noting that the Southern Resident Killer Whale population in British Columbia is facing an imminent threat to its survival and recovery and the Government is committed to taking further action to protect this iconic species as well as recover Chinook stocks, the Southern

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Resident's preferred prey. An overview of actions currently in place to support the recovery of this population can be viewed at https://www.canada.ca/en/fisheries-oceans/news/2018/05/government-of-canada-takes-action-to-protect-southern-resident-killer-whales.html.

Further, a full suite of measures that support recovery of Resident Killer Whales are identified in the 2017 Species at Risk Action Plan, available at http://www.registrelep-sararegistry.gc.ca/document/default_e.cfm?documentID=2944.

Kind regards,

Sharlene Shaikh
Species at Risk Biologist – Marine Mammals

From: [redacted]
Sent: August-05-18 3:46 PM
To: NCR SARA / LEP RCN (DFO/MPO)
Subject: On the West Coast

You can add the same main threats that hinder the recovery of the blue whale on the East Coast to Orcas on the West Coast.

On Species at Risk website: *"The main threats to its recovery are anthropogenic noise, lack of food availability, contaminants, collisions, disturbances..."*

Add also consideration that the orcas are losing salmon as a food source. Nothing has been seriously done with fish farms and contaminants/viruses. With the increase of tankers and bitumen, collisions and contaminants, disturbances have a direct effect.

But also the investment in a pipeline increases carbon output and global warming even though the Ministers involved acknowledge global climate change. Why don't they do something constructive to mitigate the carbon problem? Why not alternative energy sources instead of fossil fuels? The logic of the Federal Government has no logical answers to rely on other than "ledger sheets and promise of jobs." The same can be gotten from green energy sources and alleviate the carbon problem also.

From the North Shore where Wilkinson and Beech are representatives knowing full well the problems at hand but supporting the nonsensical party line.

[redacted]

s.21(1)(a)

s.21(1)(b)

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Dozie, Juachi

From: Brekke, Heather
Sent: August-13-18 10:27 AM
To: Shaikh, Sharlene; Jones, Lisa Ann
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Attachments: MECTS-#3951148-v1-Recommendation_2018-001-01585_hb.docx

Fyi, my response for info.

From: Brekke, Heather
Sent: August-13-18 10:27 AM
To: Fogliato, Cara
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hi Mark,

Please see attached.

Best
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

From: Fogliato, Cara
Sent: August-13-18 9:39 AM
To: Brekke, Heather
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Good morning Heather,

For this recommendation, please use the template when providing input.

Thank you,

Mark Johal on behalf of:

Cara Fogliato
Executive Assistant to Regional Director, Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Cara.Fogliato@DFO-mpo.gc.ca / Tel: 604-666-6285

s.21(1)(a)

s.21(1)(b)

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From: Brekke, Heather
Sent: August-13-18 9:36 AM
To: Fogliato, Cara
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hi Cara,

Can you confirm whether you would like a response to item 2 via email (i.e. a statement), or if you require this in the attached template?

Thanks
Heather

From: Fogliato, Cara
Sent: August-10-18 3:44 PM
To: Silverstein, Adam; Chestnut, Tina; Brekke, Heather; Kenyon, Robyn
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Good afternoon all,

EMB has been asked to provide input for a meeting recommendation for the Minister. The incoming letter is coming Could you please submit your input to me by 1:00pm Monday August 13th for RD approval.

Thank you,

Mark Johal on behalf of:

Cara Fogliato
Executive Assistant to Regional Director, Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Cara.Fogliato@DFO-mpo.gc.ca / Tel: 604-666-6285

s.21(1)(a)

s.21(1)(b)

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From: Barton, Meagan
Sent: August-10-18 3:26 PM
To: Webb, Cheryl; Murdoch, Sarah; Nener, Jennifer; Lamont, Averil
Cc: Negosu, Paula; Fogliato, Cara; Lawrie, Kirsten
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi there,

Sorry for the late notice. This task is due early next week. [redacted] will be the lead and will require your input. Please submit your input to the [redacted].

Thank you so much
Eva on behalf of Meagan

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Barton, Meagan
Sent: August-10-18 11:43 AM
To: Nener, Jennifer
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi Jennifer,

[redacted]

Thanks

Eva

[redacted]

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

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s.21(1)(a)

s.21(1)(b)

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Church, Ashley
Sent: August-10-18 11:13 AM
To: Barton, Meagan
Cc: Lawrie, Kirsten
Subject: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi Ladies,

The following docket is for processing for the Minister

Lead: PAC - FM
Input Required From: PAC-Policy
GCCMS #: 2018-001-01585
Routed to FM and Policy in GCCMS

The following information will need to be included in your response:

- completed "Recommendation Template" indicating whether the Minister should attend/meet (**Y/N**)
- up to 3 bullets of context/background info for the recommendation
- the completed approval form

If you believe your group should not take the lead/provide input on this docket, please advise me immediately.

Please submit your documents to RDGO no later than August 13th, COB.

Thank you,

Ashley Church
Correspondence Officer | Agente de correspondance
Regional Director General's Office/Bureau Directeur Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Telephone | Téléphone (604) 666-3303
Ashley.Church@dfo-mpo.gc.ca

From: Godby, Leah
Sent: August-10-18 7:52 AM
To: Church, Ashley
Cc: Langton, Erin; Mostowich, Kyla
Subject: FOR INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hello,

Please provide input for this recommendation by **COB August 14, 2018**

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The following information will need to be included in your response:

- completed "Recommendation Template" indicating whether the Minister should attend/meet (**Y/N**)
- up to 3 bullets of context/background info for the recommendation
- the completed approval form
    - Please let MCU know if further approvals are needed. For example, ADM

If you need to request a **lead change**, **contact MCU immediately**. Please do not wait until the recommendation is due or late.

Please note: Should input from multiple sectors, directorates and/or regions be required, the MCU designated lead will be responsible for obtaining contributions.

Thank you for your assistance with this docket,

Leah Godby
A/Senior Analyst, Ministerial Correspondence Unit
Fisheries and Oceans Canada / Government of Canada
Leah.Godby@dfo-mpo.gc.ca / Tel: 613-991-6932

Analyste principal, Unité de la correspondance ministérielle
Pêches et Océans Canada / Gouvernement du Canada
Leah.Godby@dfo-mpo.gc.ca / Tel: 613-991-6932

MCCU Analysts/Analystes: XNCR-GrpCA/AC@dfo-mpo.gc.ca
MCCU Writers/Redacteurs: XNCR-GrpCW/RC@dfo-mpo.gc.ca

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Ministerial Correspondence / Correspondance ministérielle Approval Form / Formulaire d'approbation

MCCU DOCKET # / N^{O} DU DOSSIER UCCM: 2018-001-01585	MCCU CONTACT / RESPONSABLE À L'UCCM : CHANTAL BRUVELS
RECOMMENDATION/ RECOMMANDATION	

DATE AND DEADLINES / DATE ET ÉCHÉANCE

DUE DATE TO MINO / ÉCHÉANCE AU CM : (mm-dd-yyyy / mm-jj-aaaa)	8/10/2018	**DATE RECEIVED IN MCCU / DATE DE RÉCEPTION À L'UCCM :** (mm-dd-yyyy / mm-jj-aaaa)	8/8/2018

COMMENTS / APPROACH – COMMENTAIRES / APPROCHE

APPROVALS / APPROBATIONS

Level / Niveau	Name, Title and Sector / Nom, titre et secteur	Assigned Date / Date fixée	Date Due / Échéance	Date Approved / Date d'approbation	Changes / Modifications
Director / Directeur(trice)					
DG Regional Director / Directeur(trice) régional(e)					
IF NECESSARY / SI NÉCESSAIRE					
ADM / RDG / DC / CO / AC SMA / DGR / SA / BC / CA					
Indigenous Affairs / Affaires autochtones Legal / Services juridiques IGA / AI					
IF / SI PROVINCIAL / TERRITORIAL					
DM / SM					
PCO / BCP					

OTHER CONSULTATIONS / AUTRES CONSULTATIONS

INFO COPIES TO / COPIES POUR INFORMATION À (Office, Branch, Date / Bureau, direction, date)	**DEVELOPED WITH SME(S) OR OTHER STAKEHOLDER(S) / ÉLABORÉ AVEC EXPERT(S) EN LA MATIÈRE OU AUTRE(S) INTERVENANT(S)** (Name, Title, Branch, Date / Nom, titre, direction, date)
•	•
OGD / AMG - (Name, Title, Branch, Date / Nom, titre, direction, date)	
•	

FOR MCCU USE / RÉSERVÉ À L'UCCM

b.c.c. / Cci – (Name, Department / Nom, ministère)	c.c. – (Name, email address / contact info / Nom, courriel, coordonnées)
•	•
ATTACHMENTS TO RESPONSE / PIÈCES JOINTES À LA RÉPONSE	
•	

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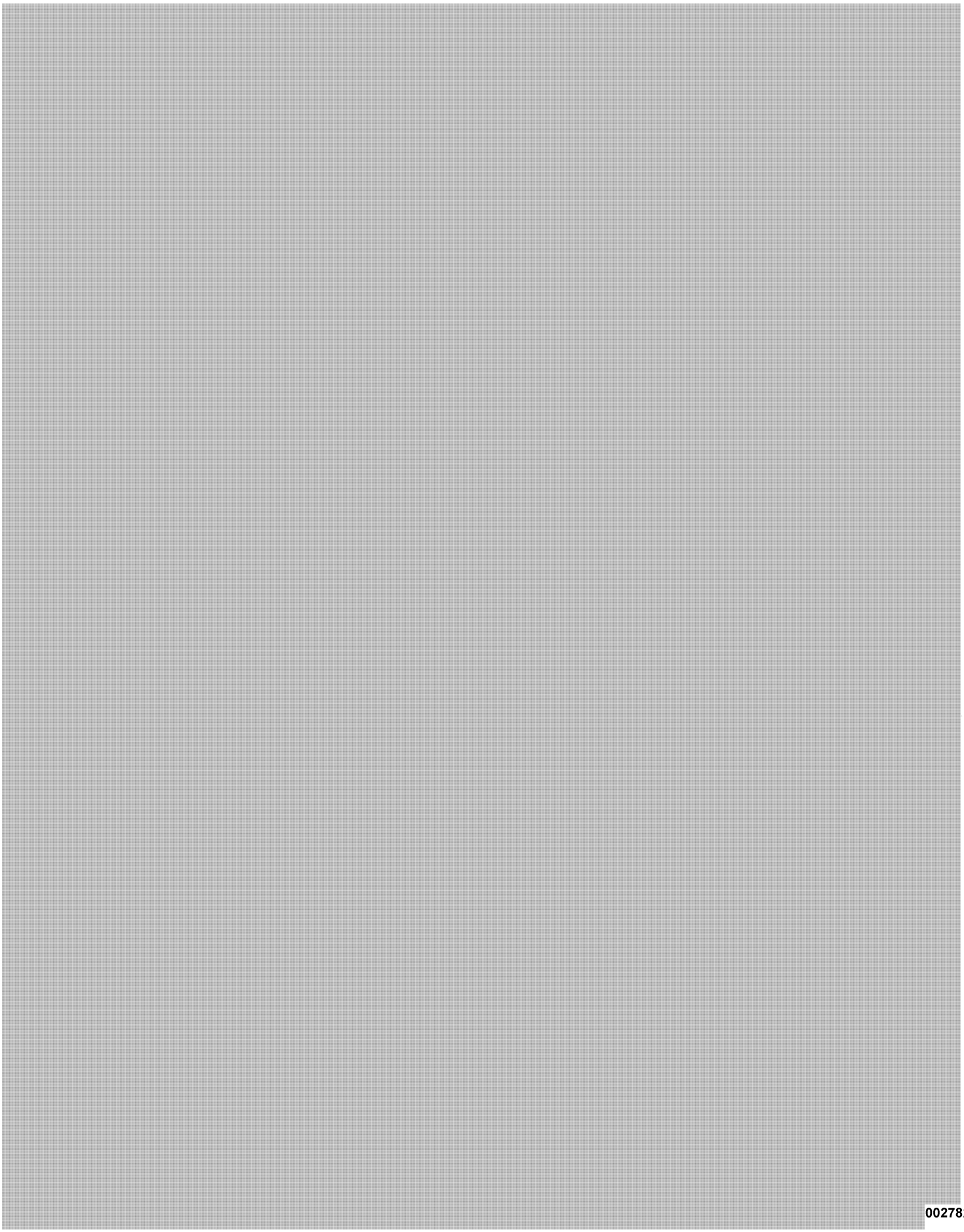
s.21(1)(a)

s.21(1)(b)

RECOMMENDATION FOR DOCKET 2018-001-01585



Page 2783

is withheld pursuant to sections

est retenue en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

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Khanna, Sukriti

From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: August-13-18 8:55 AM
To: 'Kim M Parsons'; 'Kristin Wilkinson - NOAA Federal'; Brad Hanson - NOAA Federal; Wood, Chelsey AGRI:EX; Kathi Lefebvre (NOAA Federal)
Cc: Linda Rhodes (NOAA Federal); Gabe Wisswaesser; Melanie Paquin; [redacted]
Subject: RE: big fecal from the J16s today
Attachments: J50 REVISED HEALTH ASSESSMENT Aug 13 2018.docx

Hi Kim
At present, there is no material coming to Canada, the 15 ml sample is designated for investigators in Seattle and once the feces have been sent out, any residual can be stored at -80.
A revised draft for fecal (and breath) sample disposition is attached and essentially, there is sufficient volume of feces to cover all requests.

Whale genetics and id, Kim
Prey analysis, Kim
HABs, Kathy Lefebvre (2-3 ml of feces fresh or frozen, depending on when the samples are submitted) Microbiome, Linda Parasitology, Chelsea Wood, U of Washington (2 ml, fresh and not frozen) Endocrine, Sam (feces on sterile gauze)

I am not certain what volumes or how the samples should be stored until analysis, but if the samples can be forwarded today, this should ensure the material is still relatively fresh. Kathi and Chelsea have been copied in case there are specific instructions regarding handing the fecal sample.

Please note that the 5 ml sample to be shipped to Hendrik will be subsampled at SeaWorld with appropriate samples (Teflon swabs, culture plates, or fresh feces) forwarded to UC Davis and Georgia. We are arranging it this way to facilitate and expedite this shipment for diagnostic studies. Future efforts may be refined.

Thank you
Stephen

-----Original Message-----
From: Kim M Parsons [mailto[redacted]
Sent: Monday, August 13, 2018 8:34 AM
To: Raverty, Stephen AGRI:EX; 'Kristin Wilkinson - NOAA Federal'; Brad Hanson - NOAA Federal
Cc: Linda Rhodes (NOAA Federal); Gabe Wisswaesser; Melanie Paquin; Hendrik.Nollens@seaworld.com; [redacted]
Subject: Re: big fecal from the J16s today

Thank you for the details, Stephen. As soon as the samples make their way to NWFSC, I will take my subsample & can ship the 5ml sample on to Hendrik on blue ice this afternoon.

Are we sending any of it your way? What are the plans for the 15ml tube in terms of storage method & analyses? Just wondering if it needs to be kept refrigerated or if we want to freeze it at some point.

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Best,

Kim.

On 8/13/2018 8:24 AM, Raverty, Stephen AGRI:EX wrote:
> If possible, could you please arrange to have the 5 ml fecal sample shipped today on ice, by overnight courier to Dr Hendrik Nollens at SeaWorld. The shipping address and Hendrik's phone number are below.
> Thank you
>
>
> Hendrik Nollens, DVM
> SeaWorld San Diego
> Veterinary Services
> 500 SeaWorld Dr
> San Diego CA 92109
> (619) 606-6178
>
> -----Original Message-----
> From: Kristin Wilkinson - NOAA Federal
> [mailto:[redacted]
> Sent: Monday, August 13, 2018 7:00 AM
> To: Brad Hanson - NOAA Federal
> Cc: Linda Rhodes (NOAA Federal); Gabe Wisswaesser; Raverty, Stephen
> AGRI:EX; Kim Parsons; Melanie Paquin; Hendrik.Nollens@seaworld.com;
> [redacted]
> Subject: Re: big fecal from the J16s today
>
> Melanie,
>
> I can be reached at x4747 or on my cell at 206-550-6208. Text might be
> best, I've got a morning full of meetings but two interns in standby
> to run it over.
>
> Gabe, what is your number and do you have any time restrictions today
> for the sample to be dropped off?
>
> The goal will be to get it over there as soon as I have it this morning.
>
> Thanks,
> Kristin
>
[redacted]
>
>> On Aug 13, 2018, at 6:42 AM, Brad Hanson - NOAA Federal [redacted] wrote:
>>
>> Hi all
>>
>> Kristen - please coordinate with Melanie to pickup sample this
>> morning and Gabe to receive sample - Melanie is in Bldg 4 at
>> Sandpoint

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>>
>> Gabe - there are 2 tubes of feces and a bunch on gauze . One with
>> about 5ml and other with about 15ml. Stephen will send instructions
>> for sub sampling and distribution and shipping instructions for the
>> 15ml The tube with 5ml is intended for Hendrik- he will send shipping
>> instructions Kim can use some of the sample on gauze for genotyping
>> Don't freeze remaining sample until all sub sampling has been
>> completed Thanks Brad
>>
>>
>> [redacted]
>>
>>> On Aug 13, 2018, at 06:00, Linda Rhodes (NOAA Federal) < [redacted] wrote:
>>>
>>> Hi all,
>>>
>>> I'm not in the office today, but Gabe (working with me on the SRKW project) will be in the lab today & he can coordinate with Melanie.
>>> His office/lab # is 206-860-3421. (He's also cc'd here.)
>>>
>>> Thanks Brad & Melanie!
>>> Linda
>>>
>>>> On Aug 12, 2018, at 7:55 PM, Brad Hanson (NOAA Federal) [redacted] wrote:
>>>>
>>>> we got about a 20 ml fecal from the J16s - its either from 16, 42,
>>>> or 50
>>>>
>>>> i put the whole sample on ice and Melanie is bringing it back to
>>>> Seattle tonight rather than ship to Boeing field
>>>>
>>>> email her in the AM and she will coordinate with one of you to have
>>>> someone pick it up either at Sandpoint or our house in Lake Forest
>>>> Park - either is probably faster than Boeing Field
>>>>
>>>> thanks
>>>>
>>>> Brad
>>>>
>>>> --
>>>> ==========ver
>>>> ==========
>>>> M. Bradley Hanson, Ph.D.
>>>> NOAA/NMFS/Northwest Fisheries Science Center
>>>> 2725 Montlake Blvd. E
>>>> Seattle, WA 98112
>>>>
>>>> Office phone: 206-860-3220
>>>> Fax: 206-860-3400
>>>> Cell Phone [redacted]
>>>>

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--

Kim M. Parsons, Ph.D.

s.19(1)

Research Biologist

Marine Mammal Laboratory
NOAA, Alaska Fisheries Science Center
7600 Sand Point Way NE
Seattle, WA 98115

AND

Conservation Genetics
NOAA, Northwest Fisheries Science Center
2725 Montlake Blvd E
Seattle, WA 98112

cell phone
lab phone 206 302 2428

http://www.afsc.noaa.gov/nmml/personnel/nmmlprofile.php?name=Kim.Parsons
https://scholar.google.com/citations?hl=en&user=8unbZEYAAAAJ&view_op=list_works&sortby=pubdate

[NGOS - Government Contractor for Marine Mammal Laboratory, AFSC NOAA]

"There is no science without fancy, and no art without facts."
S.J. Gould

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J50 PROPOSED HEALTH ASSESSMENT OF RECOVERED BLOW AND FECAL SAMPLES

INSTRUCTIONS FOR SAMPLE PROCESSING ON-BOARD:

Exhaled breath samples*:

If feasible, breath samples should be collected simultaneously on blood agar, Sabouraud's, salt enriched agar, and a sterile empty petri dish. If this is not possible, the exhaled breath should be collected on a sterile petri dish with no media.

1. If breath samples are collected on separate Blood agar, Sabouraud's, salt enriched agar plates:
    a. Close lid after sample collection, label, tape shut and keep cool until shipping.
2. If only a single sterile empty collection plate(s) is used to collect the breath sample, then sub-sample the surface with sterile swabs:
    a. With 1 swab, prepare smears on 3 glass slides. Label and place the slides in a secure area and air dry. Keep at room temperature until shipping to SeaWorld.
    b. Collect 2 swabs in transport media for bacteriology (Ames) and 2 replicate dry swabs for fungal culture. Keep the swabs for fungal culture dry and in separate sterile containers. Keep cool and ship 1 bacteriology swab and 1 fungal swab each to SeaWorld and UC Davis.
    c. Place a third swab RNA Later® or retain dry and place in a sterile container. Refrigerate until shipped to UC Davis and NOAA.

Fecal samples*:

Fecal samples may be opportunistically collected in areas of J50 and at present, all suspect samples should be submitted for diagnostic evaluation. The amount and consistency of the feces may vary and if feasible, as much case material should be sampled as possible by dip net and placed in sterile containers. There is a tiered diagnostic approach with microbiology, cytology, molecular studies (PCR) and parasitology of prime consideration and if there are enough feces, samples should be allocated for hormone, microbiome, harmful algal toxin screening (HABs) and other diagnostic and research studies.

1. Place replicate samples of 3-4 ml of feces in 3 separate sterile containers and chill. The priority sample should be chilled and forwarded to the UC Davis diagnostic laboratory within 24-48 hours for enteric pathogen screening, fecal parasitology, fungal culture, and special Salmonella and Brucella culture. Do not freeze or place this sample in direct contact with ice.
2. A 1-2 ml sample of feces should be couriered to SeaWorld, San Diego for cytology and duplicate culture and parasitology. This sample should be chilled, but not frozen or in direct contact with ice.
3. Please collect 4 swabs the fecal sample using a Teflon or cotton swabs. Place either in RNA and DNA Later® or a sterile container for microbiome and molecular (polymerase chain reaction, PCR) studies. Please keep at room temperature or chilled until shipment to NOAA, Seattle, University of Georgia, and UC Davis.
4. One of the above replicate 3-4 ml samples may be chilled or frozen and forwarded to the University of Washington, Seattle and NOAA for endocrine studies, whale genotyping and identification, prey analysis and harmful algal bloom toxin screening.

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INSTRUCTIONS FOR SAMPLE SHIPPING AND PROCESSING ON LAND:

Samples should be collected as early in the day as possible and shipped that afternoon to expedite overnight delivery to reference laboratories. The labs and contact information are provided below. When shipping, please inform Dr J Gaydos to ensure the labs are prepared to receive the samples and case submission forms are included. Samples can be shipped directly to UC Davis Monday through Thursday and should be sent to SeaWorld by prior arrangement or on Friday for overnight delivery.

Sample	Lab	Status/Disposition
Breath sample	UC Davis	
Breath sample	SeaWorld	
Breath sample	Dr Linda Rhodes	
Fecal sample	UC Davis	
Fecal sample	SeaWorld	
Fecal sample	Dr Linda Rhodes/Dr Kim Parsons	
Fecal sample	Dr S Wasser	
Fecal sample	Dr Chelsea Wood	
Fecal sample	Dr J Saliki	

***Please archive any surplus fecal samples.**

REFERENCE LABORATORIES AND CONTACT INFORMATION

Microbiology and molecular studies
Tracey Goldstein, PhD
School of Veterinary Medicine
Wildlife Health Center
University of California,
1 Shields Avenue,
Davis, California, 95616-8734
(530) 752-4167
FAX (530) 752-3318
http://www.vetmed.ucdavis.edu/whc

Diagnostic microbiology, parasitology and clinical pathology
Hendrik Nollens, DVM
SeaWorld San Diego
Veterinary Services
500 SeaWorld Dr
San Diego CA 92109
(619) 606-6178

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Microbiome, fecal hormones, whale genotyping and prey analysis
Linda D. Rhodes, PhD and Kim Parsons, PhD
Northwest Fisheries Science Center, NOAA Fisheries
2725 Montlake Boulevard East
Seattle, WA 98112 USA
(206) 860-3279

Parasitology
Chelsea L. Wood, PhD
Assistant Professor
University of Washington
School of Aquatic and Fishery Sciences
Box 355020
Seattle, WA 98195-5020
(831) 324-3076

Molecular studies
Jeremiah T. Saliki, DVM, PhD, DACVM
Director & Professor of Virology
Serology/Virology Section Head
Athens Veterinary Diagnostic Laboratory
The University of Georgia
Phone: 706-542-5568
Website: ugavetlab.org

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-13-18 8:28 AM
To: Girouard, Louise
Cc: Thomson, Andrew
Subject: RE: SRKW J50 media update Monday Aug 13

Hi Louise,
I am not able to participate this morning on the call as I will be on the water.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Girouard, Louise
Sent: Monday, August 13, 2018 6:46 AM
To: Cottrell, Paul; Davis, Neil; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Higgins, Linda; Demsky, Arthur; Cauffope, Genevieve
Cc: Bate, Dan; Sloan, Lara; Malikian, Janine
Subject: Re: SRKW J50 media update Monday Aug 13

Good morning,

There will be a NOAA\DFO media call this morning to give an update on J50,
As we have seen, the Centre for whale research issued a NR regarding J35 letting go of her calf and seems to be doing well.

Paul, Sheila Andy. Please let me know if you are available this morning to participate.

Will forward the call in info shortly.

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From: Cottrell, Paul
Sent: Saturday, August 11, 2018 9:01 AM
To: Davis, Neil; Thornton, Sheila; Lowe, Carmel; Thomson, Andrew; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Girouard, Louise; Higgins, Linda; Demsky, Arthur; Cauffope, Genevieve
Subject: RE: SRKW weekend planning

J-pod located off Eagle Point (San Juan Island) travelling southwest in US Waters. Fog in that area right now.

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

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s.16(2)
s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Davis, Neil
Sent: August-13-18 1:22 PM
To: Brown, Laura (Pacific)
Cc: Thomson, Andrew; Brown, Laura (Pacific)
Subject: Re: SFAB South Coast meeting this fall - virtual meeting - heads up.

Thanks Laura, that's helpful. I'm fine w a 2nd mtg being virtual

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Brown, Laura (Pacific)
Sent: Monday, August 13, 2018 12:50 PM
To: Davis, Neil
Cc: Thomson, Andrew; Brown, Laura (Pacific)
Subject: RE: SFAB South Coast meeting this fall - virtual meeting - heads up.

[redacted]

Thanks

Laura

Laura L. Brown, PhD
Director, South Coast Area
Fisheries and Oceans Canada/Government of Canada
Laura.L.Brown@dfo-mpo.gc.ca Tel: 250 756-7280/Cell: [redacted]
Directrice, secteur de la côte sud
Pêches et Océans Canada/Gouvernement du Canada
Laura.L.Brown@dfo-mpo.gc.ca Tel: 250 756-7280/Tél. cell.: [redacted]

From: Davis, Neil
Sent: August-13-18 12:44 PM
To: Brown, Laura (Pacific); Thomson, Andrew
Subject: RE: SFAB South Coast meeting this fall - virtual meeting - heads up.

Ok thanks. I was thinking if it was before mid Oct we could have used it as a venue to support their input to the SRKW critical habitat amendment consultation process, but that (should) close Oct 19.

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[redacted]

Thx

Neil

From: Brown, Laura (Pacific)
Sent: Monday, August 13, 2018 12:14 PM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: RE: SFAB South Coast meeting this fall - virtual meeting - heads up.

It would be sometime in November.

Laura

Laura L. Brown, PhD
Director, South Coast Area
Fisheries and Oceans Canada/Government of Canada
Laura.L.Brown@dfo-mpo.gc.ca Tel: 250 756-7280/Cell: [redacted]
Directrice, secteur de la côte sud
Pêches et Océans Canada/Gouvernement du Canada
Laura.L.Brown@dfo-mpo.gc.ca Tel: 250 756-7280/Tél. cell. [redacted]

From: Davis, Neil
Sent: August-13-18 12:06 PM
To: Brown, Laura (Pacific); Thomson, Andrew
Subject: RE: SFAB South Coast meeting this fall - virtual meeting - heads up.

Hi Laura,

What is the timeframe for the meeting?

Thx
Neil

From: Brown, Laura (Pacific)
Sent: Friday, August 10, 2018 1:29 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: Brown, Laura (Pacific) <Laura.L.Brown@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: SFAB South Coast meeting this fall - virtual meeting - heads up.
Importance: High

Hi Andy and Neil,

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Please let me know if you would like to discuss.

Thanks

Laura

Laura L. Brown, PhD
Director, South Coast Area
Fisheries and Oceans Canada/Government of Canada
Laura.L.Brown@dfo-mpo.gc.ca Tel: 250 756-7280/Cell:
Directrice, secteur de la côte sud
Pêches et Océans Canada/Gouvernement du Canada
Laura.L.Brown@dfo-mpo.gc.ca Tel: 250 756-7280/Tél. cell.:

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Khanna, Sukriti

From: Davis, Neil
Sent: August-13-18 10:44 AM
To: Khanna, Sukriti
Subject: RE: Black binder week of Aug 20 - for your approval
Attachments: Black Binder week of Aug 20 18 ND edits.docx

I made some edits. Please put this version forward. It does not need to be secret

---

From: Khanna, Sukriti
Sent: Monday, August 13, 2018 10:18 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: Black binder week of Aug 20 - for your approval

Hi Neil,

Please find attached the black binder submission for your review and approval. Please note that the document classification is secret as it has SRKW listing. If you want me to change this, please let me know.

Thanks,
Sukriti

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s.21(1)(a) s.21(1)(b)

TAB 7 - UPCOMING ISSUES AND DECISIONS

UNCLASSIFIED

#	ISSUE	DESCRIPTION	MINISTERIAL IMPACT	NEXT STEPS / STATUS
	Program Delivery – Week of Aug 20			
1	Publication of the proposed *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada* on the Species at Risk Registry for a 60-day online consultation period	An amendment to the Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada (aRS) will be published on the Species at Risk Public Registry for a 60-day national online comment period, anticipated to start August 20, 2018. This amendment includes two additional areas of proposed critical habitat (CH) and clarifies the functions, features and attributes of existing and proposed CH. DFO Pacific region conducted an external review on the draft aRS from June 12 – July 11, 2018. Significant attention and responses were received; however, the majority addressed concern with the process and did not result in substantive changes to the aRS.		Once approved by the Minister the aRS will be posted to the SAR Public Registry for a 60d national public consultation period, anticipated to occur August 20-October 19, 2018. Notification of the posting of the proposed aRS will be sent to all interested parties, including key Indigenous groups and stakeholders; distributed via the SAR public registry notification service; and will be communicated via social media to ensure that all interested parties have an opportunity to provide input. Regional staff are considering arranging meetings with key interests to support their understanding of the process and enable their input during the consultation period. The final amended Recovery Strategy is anticipated to be published by late November 2018 and the CH protected via a CH Order by December 2018.
2				

NOTE:

- Only include issues that are of relevance to the Minister. If the Minister doesn't need to know, do not include it. A 'NIL' response is acceptable.
- Always spell out an acronym the first time it appears.
- 9 point Arial font, single spaced. Messaging should be high-level. Always write in complete sentences – no point form.
- If your submission is not classified as SECRET please provide the appropriate classification.

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Mbarushimana, Jenny

From: Jenkins, Randy
Sent: August-13-18 2:38 PM
To: Thomson, Andrew; Davis, Neil; Harber, Lee
Subject: FW: SRKW Update Note - August 13
Attachments: MECTS-#3949687-v6-IN-Southern_Resident_Killer_Whale_Update.docx

FYI...

From: Jenkins, Randy
Sent: Monday, August 13, 2018 5:38 PM
To: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>
Cc: Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>; Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>
Subject: SRKW Update Note - August 13

Attached is the SRKW update note for today.

Thanks.

Randy

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Southern Resident Killer Whale Update

(August 13, 2018 – 14:20 EDT)

Issue: The rapidly deteriorating health condition of Southern Resident Killer Whale (SRKW) J50 of SRKW J-pod has prompted the U.S. National Oceanic and Atmospheric Administration (NOAA) to propose an emergency action plan to treat her. The response team located J50 on Thursday, August 9th and began sampling and treatment. Additionally, J35 was last seen on Saturday August 11th travelling without her dead calf.

Update:

- NOAA held their daily media briefing at 10 am PDT to update on J50 and J35. DFO was represented by Andrew Thomson (Resource Management), Sheila Thornton (Science) and Paul Cottrell (Marine Mammal Unit). This is the last planned media briefing.
- J50 was observed off San Juan Island in US waters on Saturday August 11th and Sunday August 12th. The large tides and strong currents over the weekend made it difficult for J50 to swim well in the strong tide.
    - The first trail fish feeding with J50 was conducted today, August 13th, in U.S. waters, in coordination with the Lummi Nation and with use of a drone for documentation.
    - Fish were placed 70-150 metres in front of J50, yet there is no confirmation as to whether J50 consumed the fish, which would indicate the first trial as unsuccessful.
    - Drone footage was collected during the trail feeding operation, which will be used to confirm that no fish were consumed and review the operation.
    - A fecal sample was collected over the weekend; however it is unknown whether the fecal samples came from J50 or J16 (mother) or J42 (brother), therefore genotyping will confirm this. The sample will be analyzed for basic nutrition, including stress hormones.
- An application from NOAA to conduct supplemental feeding for J50 in Canadian waters has not been received by DFO.
- Antibiotics have been ordered by NOAA and will be available early this week, if the response team is able to locate and administer another dose of antibiotics to J50.
- J35 was observed by the Centre for Whale Research in U.S. waters without her calf on Saturday August 11, 2018.
- As per NOAA's latest response team report, J pod is currently headed west and teams are on standby until they come back in closer to the coast.

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s.19(1)

Mbarushimana, Jenny

From: Davis, Neil
Sent: August-13-18 11:19 AM
To: Cottrell, Paul
Subject: RE: Daily Debrief - Sunday, August 12th - Live Fish Trial Conducted

Thanks Paul

From: Cottrell, Paul
Sent: Monday, August 13, 2018 8:27 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Kennedy, Eddy <Eddy.Kennedy@dfo-mpo.gc.ca>; Higgins, Linda <Linda.Higgins@dfo-mpo.gc.ca>; Cauffope, Genevieve <Genevieve.Cauffope@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>
Subject: FW: Daily Debrief - Sunday, August 12th - Live Fish Trial Conducted

Hi All,
Summary below of NOAA's efforts yesterday. J-pod was in US waters this weekend.
Cheers,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Kristin Wilkinson - NOAA Federal [redacted]
Sent: Sunday, August 12, 2018 10:16 PM
To: Katy Foster; Brad Hanson (NOAA Federal); Holly Fearnbach; [redacted] John Durban - NOAA Federal; Teri Rowles; Lynne Barre - NOAA Federal; Marty Haulena; Deborah Giles; Michael Milstein - NOAA Federal; Scott Rumsey - NOAA Federal; Mark Strom - NOAA Federal; Ruth Howell; Mike Ford; Jim Milbury - NOAA Federal; Barry Thom - NOAA Federal; Thornton, Sheila; Chris Yates - NOAA Federal; Forbes Darby - NOAA Federal; Kate Naughten; John Ewald - NOAA Federal; Becker, Penny A (DFW); Cottrell, Paul; Teresa Mongillo; Amilee Wilson - NOAA Federal; Jennifer Ise - NOAA Federal; Emma Htun - NOAA Federal; Samantha Guidon - NOAA Federal; Katherine Brogan - NOAA Affiliate; Jennie Lyons; Deborah Fauquier; jeff foster; Sarah Mesnick; Director Marine Mammal; Kevin Werner - NOAA Federal; Joseph

Pages 2801 to / à 2809

are duplicates

sont des duplicatas

Pages 2810 to / à 2811

are not relevant

sont non pertinentes

s.21(1)(a)

s.21(1)(b)

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Questions and Answers:

External Review of Draft *Amended Recovery Strategy for Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada*

[redacted]

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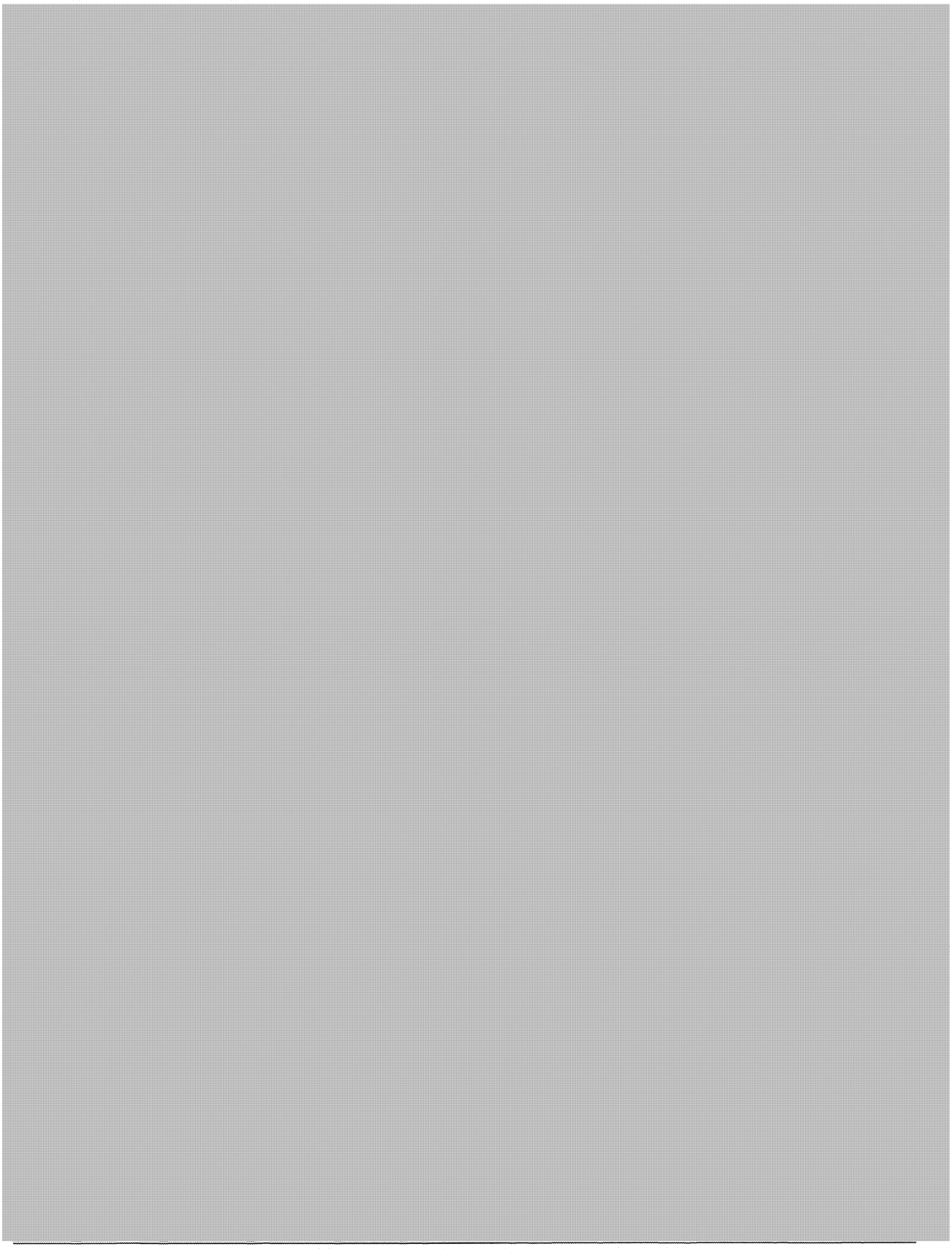
s.21(1)(a)

s.21(1)(b)

these current fishing measures are not directly related to this specific review process on the amended Recovery Strategy.



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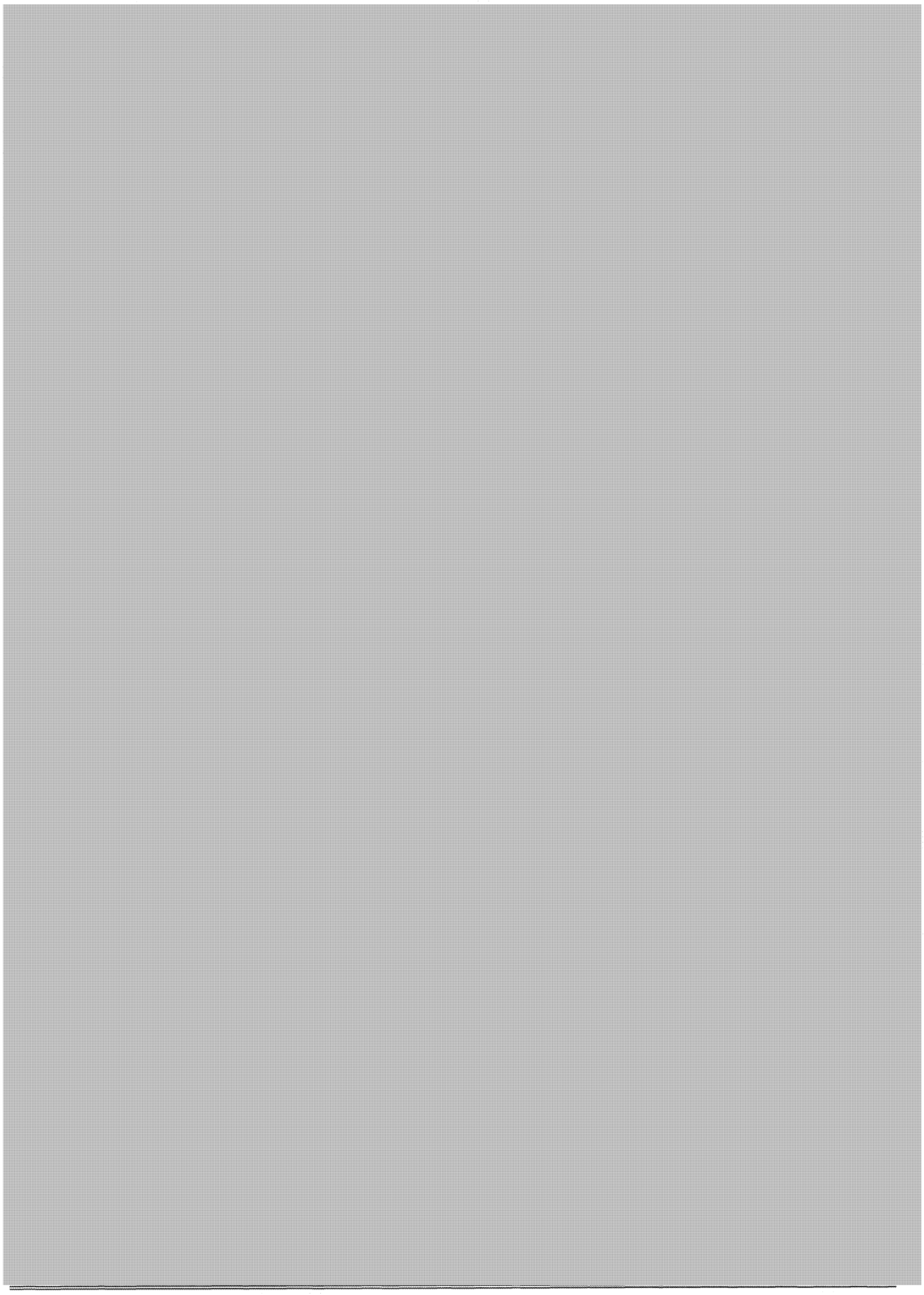

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Mbarushimana, Jenny

From: Fershau, Jonathan
Sent: August-14-18 1:34 PM
To: Brekke, Heather
Cc: Jones, Lisa Ann; Hagerman, Kendra
Subject: RE: SFAB main board members - please confirm for RKW aRS distribution list

Added to the latest Distribution list for the proposed posting notification. I am assuming the SFAB-Main Board members would be considered DFO contacts only?

With respect to the actual notification, the standard email for notification of a proposed recovery document is as follows:

> Subject: Proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada posted the Species at Risk Public Registry
>
> SALUTATION or FOR YOUR INFORMATION
>
> Fisheries and Oceans Canada (and the Parks Canada Agency?) will post the proposed version of the *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada* on the Species at Risk (SAR) Public Registry in the coming week [OR on *the date the notification is sent + 1 week*]. This species is found in the Pacific Ocean.
>
> This document will be open for public consultation on the SAR Public Registry for a 60-day comment period. Fisheries and Oceans will review comments and integrate them as appropriate, after which the final version will be posted on the Public Registry.
>
> The document can be found on the SAR Public Registry.

- Personalized Emails to:
  - WMBS (Nisga'a JFC, Nisga'a Lisims Government, Maa-Nulth JFC, Tla'amin JFC, and Tsawwassen JFC);
  - First Nations (Dear Chief, Council, Legislators, and Fisheries Managers)
  - SARCC Members (Dear SARCC Members)
  - Everyone else (FOR YOUR INFORMATION)

Questions/comments

- Are we including Parks in this email notification?
- Are we including any additional attachments / signed letters with the notification? (ie, summarizing the previous process step?)
- I am assuming that we will send this out the day the consultation site is up (August 20)– as such, this won't be a "pre-notification of posting" email.
- If available, we should provide a direct link to the report/consultations, rather than linking to the SAR Public Registry homepage.

jf

From: Brekke, Heather
Sent: August-14-18 11:17 AM
To: Fershau, Jonathan

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Cc: Jones, Lisa Ann
Subject: FW: SFAB main board members - please confirm for RKW aRS distribution list

Hi Jonathan,

Can you please ensure that when the notifications go out for the RKW aRS posting, it goes to all on the attached distribution list?

Thanks
Heather

From: Eros, Carole
Sent: August-03-18 1:18 PM
To: Brekke, Heather; Davis, Neil; Leslie, Karen; Jones, Lisa Ann
Cc: Markevicius, Feliksas; Hornby, Greg
Subject: [redacted].. SRK CH

Hi All,

[redacted] I don't expect much on my end except when the 60 day timeline is confirmed. Heather/Lisa, when you do get confirmation when it will start, will you be able to provide the SFAB with notice? I suggest sending to the Main Board. I've attached the distribution list. Felix will also have a copy.

Thanks!
Carole

From: Brekke, Heather
Sent: July-26-18 8:52 PM
To: Davis, Neil; Leslie, Karen
Cc: Eros, Carole; Khanna, Sukriti
Subject: [redacted]

Hi all,

[redacted]

s.19(1)
s.21(1)(a)
s.21(1)(b)
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[redacted]

- RKW-related pieces:

[redacted]

  - BN for RKW aRS: last I heard this was sitting in the RDG office, but was intended to be sent out today. The PCA approval came in this am. Karen, can you please check on this and send a note to our NHQ colleagues (Scott Chiu, Corina) once it has been signed so they can process on their end?

[redacted]

Have a great week,
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

002817

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Wong, Eva

From: Harber, Lee
Sent: August-14-18 8:52 AM
To: Brekke, Heather
Subject: FW: Updated SRKW Note
Attachments: MECTS-#3949687-v6-IN-Southern_Resident_Killer_Whale_Update.docx

FYI - here is the note that went up to MINO last Friday.

From: Moore, Kendra
Sent: 2018–August-10 1:17 PM
To: Jenkins, Randy
Cc: Scott, Paul G; Gilchrist, Brett; Harber, Lee; Cottrell, Paul
Subject: Updated SRKW Note

Hi Randy,

Attached is the updated SRKW note on J50 and J35 for briefing up.

Thanks,

Kendra

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s.21(1)(a)

s.21(1)(b)

Fisheries and Oceans Canada
Pêches et Océans Canada

Pacific Region
Suite 200 - 401 Burrard Street
Vancouver, British Columbia
V6C 3S4

Région du Pacifique
Pièce 200 - 401 rue Burrard
Vancouver (C.-B.)
V6C 3S4

Comment [AP1]: Please use the joint letterhead that was sent for the notification letters for the pre-consultation process.

Parks Canada Agency
Coastal British Columbia Field Unit Office
2220 Harbour Road
Sidney, BC
V8L 2P6

Agence Parcs Canada
Bureau d'unité de gestion de la Côte de la Colombie-Britannique
2220m chemin Harbour
Sidney, BC
V8L 2P6

Your file *Votre référence*

Our file *Notre référence*

[redacted]

Canada

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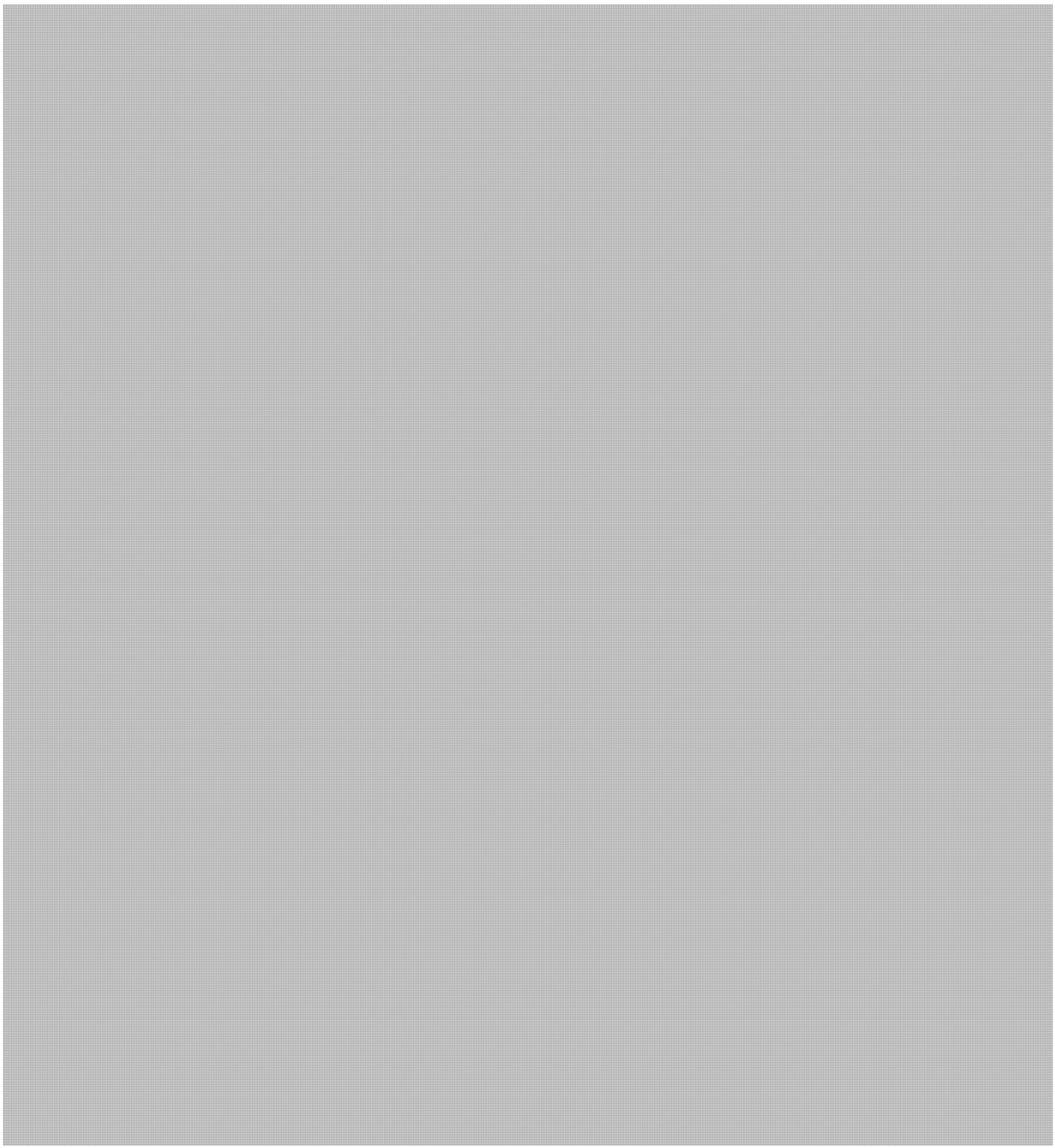
s.21(1)(a)

s.21(1)(b)



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Parks Canada Agency

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Wong, Eva

From: Harber, Lee
Sent: August-14-18 8:22 AM
To: Brekke, Heather
Cc: Webb, Cheryl
Subject: FW: SRKW Update Note - August 13
Attachments: MECTS-#3949687-v6-IN-Southern_Resident_Killer_Whale_Update.docx

FYI update to MINO – will continue to loop you guys in :)

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: (613) 797-5146

From: Jenkins, Randy
Sent: 2018–August-13 2:38 PM
To: Thomson, Andrew; Davis, Neil; Harber, Lee
Subject: FW: SRKW Update Note - August 13

FYI...

From: Jenkins, Randy
Sent: Monday, August 13, 2018 5:38 PM
To: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>
Cc: Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>; Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>
Subject: SRKW Update Note - August 13

Attached is the SRKW update note for today.

Thanks.

Randy

Pages 2823 to / à 2825

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sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

Pages 2826 to / à 2827

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21(1)(b), 19(1), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

Pages 2828 to / à 2830

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21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

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s.21(1)(a)

s.21(1)(b)

s.23

Wong, Eva

From: Chiu, Scott
Sent: August-14-18 12:08 PM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: [redacted]
Attachments:

Importance: High

Hi, Heather

[redacted]

Thank you,

Scott

From: Legault, Josée [mailto:Josee.Legault@justice.gc.ca]
Sent: August-14-18 2:57 PM
To: Chiu, Scott
Cc: Beaton, Heather (DOJ); Stewart, Julie
Subject: [redacted]

Scott,

[redacted]

Many thanks for your consideration of the above.

Josée

Pages 2832 to / à 2836

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21(1)(b), 23, 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

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Wong, Eva

From: Harber, Lee
Sent: August-14-18 8:16 AM
To: Brekke, Heather
Subject: FW: Daily Debrief - Sunday, August 12th - Live Fish Trial Conducted

Heather - from yesterday / weekend developments.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: (

From: Harber, Lee
Sent: 2018–August-13 11:16 AM
To: Burns, Adam; Jenkins, Randy; Davis, Neil; Scott, Paul G; Moore, Kendra; Gilchrist, Brett
Cc: Thomson, Andrew; Cottrell, Paul
Subject: RE: Daily Debrief - Sunday, August 12th - Live Fish Trial Conducted

In addition to weekend summary, a few additional updates from the NOAA media briefing this morning:

- NOAA informed that this will be the last planned media briefing for now and will hold additional briefings as needed going forward.
- Weekend observations indicated that J Pod may be heading west as they typically do this time of year and would return in a few days, and be in closer range for additional feeding trials and possibly administration of additional antibiotics.
- Analysis of fecal samples may help inform next steps.
- Today NOAA and DFO teams on standby and will plan based on location of J pod.
- On water teams will continue to keep an eye on J35 to observe if she is returning to normal behaviour.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

From: Cottrell, Paul
Sent: 2018–August-13 8:27 AM
To: Davis, Neil; Thomson, Andrew; Thornton, Sheila; Lowe, Carmel; Girouard, Louise; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Higgins, Linda; Cauffope, Genevieve; Sloan, Lara
Subject: FW: Daily Debrief - Sunday, August 12th - Live Fish Trial Conducted

Hi All,
Summary below of NOAA's efforts yesterday. J-pod was in US waters this weekend.
Cheers,
Paul

Paul Cottrell

Pages 2838 to / à 2846

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Khanna, Sukriti

From: Davis, Neil
Sent: August-14-18 9:51 AM
To: Cottrell, Paul
Subject: Re: Daily Debrief Calls Cancelled 8/13-8/14

Thanks Paul, these daily updates are very useful

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Tuesday, August 14, 2018 9:28 AM
To: Davis, Neil; Thomson, Andrew; Lowe, Carmel; Girouard, Louise; Thornton, Sheila; Harber, Lee; Webb, Cheryl; Kennedy, Eddy; Higgins, Linda; Cauffope, Genevieve; Sloan, Lara
Subject: FW: Daily Debrief Calls Cancelled 8/13-8/14

Hi All,
NOAA is off water until Thursday. J-pod was last seen off Port Renfrew WCVI yesterday afternoon by Strait watch. J-50 was observed but J-35 was not. Animals were spread out and viewing conditions challenging. It is likely J-pod will be offshore in the Swiftsure area today. The fog and weather will make locating challenging.
Cheers,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Kristin Wilkinson - NOAA Federal [redacted]
Sent: Monday, August 13, 2018 3:28 PM
To: Katy Foster; Brad Hanson (NOAA Federal); Holly Fearnbach; [redacted] John Durban - NOAA Federal; Teri Rowles; Lynne Barre - NOAA Federal; Marty Haulena; Deborah Giles; Michael Milstein - NOAA Federal; Scott Rumsey - NOAA Federal; Mark Strom - NOAA Federal; Ruth Howell; Mike Ford; Jim Milbury - NOAA Federal; Barry Thom - NOAA Federal; Thornton, Sheila; Chris Yates - NOAA Federal; Forbes Darby - NOAA Federal; Kate Naughten; John Ewald - NOAA Federal; Becker, Penny A (DFW); Cottrell, Paul; Teresa Mongillo; Amilee Wilson - NOAA Federal; Jennifer Ise - NOAA Federal; Emma Htun - NOAA Federal; Samantha Guidon - NOAA Federal; Katherine Brogan - NOAA Affiliate; Jennie Lyons; Deborah Fauquier; jeff foster; Sarah Mesnick; Director Marine Mammal; Kevin Werner - NOAA Federal; Joseph

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Karl Gaydos; Hendrik.Nollens@SeaWorld.com; Jim McBain; Kimball, Taylor P (DFW)
Subject: Daily Debrief Calls Cancelled 8/13-8/14

Hello All -

J pod has moved back into Canada and was sighted off of Sooke earlier today. With the whales out of our immediate area, the team will be standing down operations for Monday-Wednesday of this week. The primary vessel involved in these efforts needs to undergo repairs and the NWFSC needs to start preparing for their September SRKW field research. Our goals are to have a smaller team on water starting on Thursday for opportunistic sampling and monitoring of J50 as well as providing a platform for the veterinarians to provide medical treatment if needed. Until the NWFSC is back on the island (which may be a week or two) efforts to conduct a second live fish trial are on standby.

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted]Cell

On Sun, Aug 12, 2018 at 10:16 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:
Hello All -

J50 was encountered off of Cattle Point and was seen socializing and holding a steady pace today.

Fecal Sample: A large fecal sample was collected from the NWFSC today from J50's immediate pod. It may be from J16 (mom), J42 (brother), or J50 but it will be sent in for analysis on Monday or Tuesday at the very latest. Dr. Stephen Raverty and Dr. Hendrik Nollens worked on a revised fecal sampling protocol for the team with a tiered approach with diagnostics being the priority.

Fish Trials: The first live fish trial was conducted today with J50 in the immediate area. The Lummi Enforcement vessel (fish deployment), the King Co. Sound Guardian (support vessel), WDFW Enforcement (drone platform), and NWFSC (monitoring and lead on water coordinator) were all on scene. The boats were in the perfect positioning to introduce live Chinook (ranging from 3.5-5 lbs. to 15-20 lbs.) in front of the path of J50. The first attempt was made at 150 m and J50 took a long extended dive at that same moment. The closest the team got while releasing fish was 70 m and released two fish back to back. Some of the larger animals did show interest to fish #2 and #3 but none of them responded after the 4th was released. Drone footage was collected during the operation and the response team will review the footage and then we will have a group discussion about proceeding with a second trial. At this point in time the team believes no fish were consumed but reviewing the drone footage will help confirm that.

Monday Plans: NWFSC will be back out on the water and hopes to observe some predation events and collect fish scales from those events if given the opportunity to do so.

Vet Plans: We are currently ordering more antibiotics and they will be available early this week. If the whales stay around we will have a vet come to administer the second dose of antibiotics.

All for now,

Pages 2849 to / à 2857

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s.19(1)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-14-18 4:09 PM
To: Malikian, Janine
Subject: Re: StarMetro: interview request for humpback story

Thanks Janinie,
Sounds good. I'll give her a call tomorrow.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Malikian, Janine
Sent: Tuesday, August 14, 2018 4:05 PM
To: Cottrell, Paul
Subject: FW: StarMetro: interview request for humpback story

Hi Paul,

Are you available tomorrow to do a phone interview with [redacted]StarMetro (Toronto Sun)?

She's doing a story on the recovery of humpback whales and would like to talk to you about MM regs, disentanglements, etc.

Her phone # is [redacted]

Let me know if you're available and what time you could call her so I can relay.

Hope you're doing well,

Janine

Janine Malikian
Communications Advisor | Conseillère en Communications
Fisheries and Oceans Canada | Government of Canada
Pêches et Océans Canada | Gouvernement du Canada
200-401 Burrard Street | Pièce 200 401, rue Burrard
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4
Janine.Malikian@dfo-mpo.gc.ca
Tel/Tél: 604-666-6766 | Fax/Télécopieur: 604-666-1847
Follow us on Twitter! @DFO_Pacific / Suivez-nous sur Twitter! @MPO_Pacifique

Fisheries and Oceans Canada | Pêches et Océans Canada

From: [redacted]
Sent: August-14-18 2:43 PM
To: Malikian, Janine
Subject: Re: StarMetro: interview request for humpback story

s.19(1)

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Hi Janine,

Do you think Paul would be available tomorrow for an interview on humpback whales? Hoping for a 15 minute phone call.

I'm at

Thanks,

StarMetro Vancouver

From: "Malikian, Janine" <Janine.Malikian@dfo-mpo.gc.ca>
Date: Wednesday, 8 August, 2018 11:59 AM
To:
Subject: RE: StarMetro: interview request for humpback story

Hi

Here's the photo of J50 and her mother J16 in the fog, taken by DFO yesterday off Port Renfrew.

Please credit Brian Gisborne, Fisheries and Oceans Canada.

Cheers,
Janine

Janine Malikian
Communications Advisor | Conseillère en Communications
Fisheries and Oceans Canada | Government of Canada
Pêches et Océans Canada | Gouvernement du Canada
200-401 Burrard Street | Pièce 200 401, rue Burrard
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4
Janine.Malikian@dfo-mpo.gc.ca
Tel/Tél: 604-666-6766 | Fax/Télécopieur: 604-666-1847
Follow us on Twitter! @DFO_Pacific / Suivez-nous sur Twitter! @MPO_Pacifique
Fisheries and Oceans Canada | Pêches et Océans Canada

From:
Sent: August-08-18 11:12 AM
To: Malikian, Janine
Subject: Re: StarMetro: interview request for humpback story

Hi Janine,

Thanks for letting me know about the call.

Sheila mentioned she has a photo from yesterday's sighting of J50. Could you send that over?

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Thanks.

[redacted]

--

[redacted]

StarMetro Vancouver

[redacted]

From: [redacted]
Date: Wednesday, 8 August, 2018 8:49 AM
To: "Malikian, Janine" <Janine.Malikian@dfo-mpo.gc.ca>
Subject: Re: StarMetro: interview request for humpback story

Ah good idea ok I'll call in if I'm able to continue covering J50 today.

Btw is there an email list I need to be on to get the briefing advisories? Or do I need to talk to NOAA for that?

--

[redacted]

StarMetro Vancouver

[redacted]

From: "Malikian, Janine" <Janine.Malikian@dfo-mpo.gc.ca>
Date: Wednesday, 8 August, 2018 8:43 AM
To: [redacted]
Subject: RE: StarMetro: interview request for humpback story

Hi [redacted]

I was just about to email you!

I saw your article today re: J50. So Paul is super-busy with that issue today. I sent him your request yesterday, but haven't heard back about availability for that interview. If you can hold off on that article, it would still be a good story on the recovery of humpbacks.

By the way, if you're interested in finding out more about the J50 situation, DFO and NOAA are holding a joint media briefing this morning at 10 am, and Paul will be on the call.

You're more than welcome to call in if you like:

Call-in number: 888-566-6311
Participant Passcode: [redacted]
Please visit NOAA Fisheries West Coast for the latest updates and information.

Thanks,
Janine

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From:
Sent: August-08-18 8:35 AM
To: Malikian, Janine
Subject: Re: StarMetro: interview request for humpback story

Hi Janine,

Just wanted to touch base this morning. Do you think chances are good I'll be able to get a hold of Paul? If not I can switch gears and save this story for another time. I can also email him directly if that is helpful on your end.

Let me know!

Thanks,

StarMetro Vancouver

From: "Malikian, Janine" <Janine.Malikian@dfo-mpo.gc.ca>
Date: Tuesday, 7 August, 2018 2:00 PM
To:
Subject: RE: StarMetro: interview request for humpback story

Thanks, that helps
Janine

From:
Sent: August-07-18 1:58 PM
To: Malikian, Janine
Subject: Re: StarMetro: interview request for humpback story

Np, I can do tomorrow too.

--

StarMetro Vancouver

From: "Malikian, Janine" <Janine.Malikian@dfo-mpo.gc.ca>
Date: Tuesday, 7 August, 2018 1:56 PM
To:
Subject: RE: StarMetro: interview request for humpback story

Hi

Unfortunately, Paul is out on the water all day today, and I can't reach him.

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s.19(1)

Sorry about this – is your story due today final?

Thanks,
Janine

From: [redacted]
Sent: August-07-18 9:27 AM
To: Malikian, Janine
Subject: Re: StarMetro: interview request for humpback story

Great thanks!

Also, I was planning to ask Paul this but if you happen to have this info it may be easier via email.

Do you have humpback population numbers for B.C. And also number of sightings and entanglements for the past few years?

--
[redacted]
StarMetro Vancouver
[redacted]

From: "Malikian, Janine" <Janine.Malikian@dfo-mpo.gc.ca>
Date: Tuesday, 7 August, 2018 9:20 AM
To: [redacted]
Subject: RE: StarMetro: interview request for humpback story

Hi [redacted]

Good weekend thanks, hope you had a great one too.

I'll check with Paul about his availability and keep you posted.

Cheers,
Janine

From: [redacted]
Sent: August-07-18 8:38 AM
To: Malikian, Janine
Subject: Re: StarMetro: interview request for humpback story

Hi Janine,

Hope you had a great long weekend!

Let me know when you have a chance to check Paul's availability today.. Hoping to reach him before 2pm.

I'm at [redacted]

Thanks,
[redacted]

s.19(1)

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--

[redacted]

StarMetro Vancouver

[redacted]

From: "Malikian, Janine" <Janine.Malikian@dfo-mpo.gc.ca>
Date: Thursday, 2 August, 2018 4:56 PM
To: '[redacted]
Subject: RE: StarMetro: interview request for humpback story

Hi [redacted]

Will touch base with you Tuesday morning.

Best,
Janine

From: [redacted]
Sent: August-02-18 4:22 PM
To: Malikian, Janine
Subject: Re: StarMetro: interview request for humpback story

Oops forgot its a long weekend.

I'm looking for an interview Tuesday/Wednesday then. Thanks!

--

[redacted]

StarMetro Vancouver

[redacted]

From: "[redacted]
Date: Thursday, 2 August, 2018 3:29 PM
To: "Malikian, Janine" <Janine.Malikian@dfo-mpo.gc.ca>
Subject: StarMetro: interview request for humpback story

Hi Janine,

I have another request for you!

I'm hoping to reach Paul Cottrell to interview him about humpback whale entanglements. I'm most interested in knowing how many humpback-related entanglements/incidents there have been so far this year, but also it would be great to hear about his experience disentangling these animals when they get caught in gear.

This will be for a story I am working on about the humpbacks' successful recovery (in contrast to the SRKW's struggles) and I'm hoping it will also be an "raising awareness" story about the importance of giving these whales their space, in light of the 200m regulations the Canadian government established for orcas. I have a researcher from MERS saying humpbacks need their space too.

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[redacted]. Is he available for a phone interview Monday or Tuesday by any chance?

[redacted]

If you have questions tomorrow, best way to reach me is via text on my personal cell [redacted]

Thanks,

[redacted]

StarMetro Vancouver

[redacted]

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Khanna, Sukriti

From: Davis, Neil
Sent: August-14-18 12:28 PM
To: Harber, Lee (Lee.Harber@dfo-mpo.gc.ca)
Cc: Brekke, Heather; Nener, Jennifer (Jennifer.Nener@dfo-mpo.gc.ca)
Subject: FW: Pacheedaht SRKW Concerns

Hi Lee,

Can I ask you to lead on pulling something together for the group Cheryl references below that summarises what is happening / upcoming relating to SRKW recovery? You'll need some input from Heather's team and Jennifer's team on the SARA and fishery closure pieces, so I've cc'd them here and hope they can identify someone for you to work w on this

Thx
Neil

From: Webb, Cheryl
Sent: Friday, August 3, 2018 8:58 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Sandgathe, Tracey L <Tracey.Sandgathe@dfo-mpo.gc.ca>; Bonamis, Alston <Alston.Bonamis@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Subject: FW: Pacheedaht SRKW Concerns

Neil,

As you may be aware, I am the DFO representative on the Trans Mountain Indigenous Advisory and Monitoring Committee (IAMC). We were recently informed by one of the IAMC members [redacted] on the west coast of Vancouver Island that engagement/consultation on DFO fisheries closures related to SRKW recovery (i.e., Chinook fishery closures), and communication regarding SRKW critical habitat designation has been overwhelming and confusing. I am hoping that someone from your group, either from the SARA Marine Team or Lee Harber, may be available to make a presentation to the marine shipping subcommittee of the IAMC, which consists primarily of Indigenous groups from the Island [redacted] The presentation would focus on initiatives currently underway to promote recovery of the SRKW (via SARA, OPP, etc.). At this point, I am not sure of dates, but perhaps targeting September sometime…

Happy to discuss,

Cheryl

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Khanna, Sukriti

From: Davis, Neil
Sent: August-14-18 12:31 PM
To: Webb, Cheryl
Cc: Thomson, Andrew; Sandgathe, Tracey L; Bonamis, Alston; Harber, Lee (Lee.Harber@dfo-mpo.gc.ca)
Subject: RE: Pacheedaht SRKW Concerns

Hi Cheryl

I've asked Lee to work on pulling a summary together w the appropriate input from our SARA and salmon folks as needed. Can you please keep him posted on the mtg date as things firm up? I'm assuming something in the neighbourhood of 15-20 mins w some time for questions is in the ballpark? We may also need to consider who we'd need in attendance to effectively answer questions on the various pcs of the SRKW work.

Thx
Neil

From: Webb, Cheryl
Sent: Friday, August 3, 2018 8:58 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Sandgathe, Tracey L <Tracey.Sandgathe@dfo-mpo.gc.ca>; Bonamis, Alston <Alston.Bonamis@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Subject: FW: Pacheedaht SRKW Concerns

Neil,

As you may be aware, I am the DFO representative on the Trans Mountain Indigenous Advisory and Monitoring Committee (IAMC). We were recently informed by one of the IAMC members [redacted] on the west coast of Vancouver Island that engagement/consultation on DFO fisheries closures related to SRKW recovery (i.e., Chinook fishery closures), and communication regarding SRKW critical habitat designation has been overwhelming and confusing. I am hoping that someone from your group, either from the SARA Marine Team or Lee Harber, may be available to make a presentation to the marine shipping subcommittee of the IAMC, which consists primarily of Indigenous groups from the Island [redacted] The presentation would focus on initiatives currently underway to promote recovery of the SRKW (via SARA, OPP, etc.). At this point, I am not sure of dates, but perhaps targeting September sometime…

Happy to discuss,

Cheryl

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

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Davis, Neil

From: Davis, Neil
Sent: Tuesday, August 14, 2018 11:18 AM
To: Nener, Jennifer (Jennifer.Nener@dfo-mpo.gc.ca); Webb, Cheryl; Thomson, Andrew
Cc: Brekke, Heather; Leslie, Karen
Subject: FW: SRKW
Attachments:

All,

Neil

From: Thorleifson, Erika
Sent: Friday, August 10, 2018 12:32 PM
To: Winfield, Nicholas <Nicholas.Winfield@dfo-mpo.gc.ca>; Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Laverdure, Louise <Louise.Laverdure@dfo-mpo.gc.ca>; Goetze, Darren <Darren.Goetze@dfo-mpo.gc.ca>; Beaton, Heather (DOJ) <Heather.Beaton@justice.gc.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; Legault, Josee (DOJ) <Josee.Legault@justice.gc.ca>; Sicard, Marc <Marc.Sicard@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: Dwyer, Judy <Judy.Dwyer@dfo-mpo.gc.ca>; Verville, Josée Annie <Josee-Annie.Verville@dfo-mpo.gc.ca>; Nadeau, Simon <Simon.Nadeau@dfo-mpo.gc.ca>; Orok, Rowena <Rowena.Orok@dfo-mpo.gc.ca>; Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>
Subject: RE: SRKW

Hi all,

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Further to our discussion this morning, could you please send any comments that you have on [redacted] document to me by Friday, August 17.

Thanks,
Erika

-----Original Appointment-----
From: Dieudonné, Rilene **On Behalf Of** Winfield, Nicholas
Sent: August-09-18 3:42 PM
To: Burns, Adam; Laverdure, Louise; Goetze, Darren; Beaton, Heather (DOJ); Busby, Corina; Thorleifson, Erika; Legault, Josee (DOJ); Sicard, Marc; Scott, Paul G; Jenkins, Randy; Stewart, Julie; Webb, Cheryl; Davis, Neil; Thomson, Andrew
Cc: Dwyer, Judy; Verville, Josée Annie; Nadeau, Simon; Orok, Rowena; Gilchrist, Brett
Subject: SRKW [redacted]
When: August-10-18 11:00 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: 10W84 (Nick's Office) or 1-877-413-4788 ID#5581586

[redacted]

Pages 2869 to / à 2873

are withheld pursuant to sections

sont retenues en vertu des articles

69(1)(g) re: (e), 69(1)(g) re: (a)

of the Access to Information Act

de la Loi sur l'accès à l'information

s.21(1)(a)

s.21(1)(b)

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Mbarushimana, Jenny

From: Shaikh, Sharlene
Sent: August-15-18 12:34 PM
To: Murray, Cathryn
Cc: Brekke, Heather; Hannah, Lucie; Jones, Lisa Ann
Subject: RE: Noise-related MEQ funding proposals
Attachments: RKW AP workplan-budget and activities_Oct 18.xlsx

Hiya,

[redacted]

On an unrelated note, just a heads up that I'm emailing Andrew and Sophie some info and ideas on projects on RKW-contaminants shortly. Thanks again to you and Lucie for connecting us.

Cheers,
Sharlene

[redacted]

From: Murray, Cathryn
Sent: August-15-18 11:45 AM
To: Shaikh, Sharlene
Cc: Brekke, Heather; Hannah, Lucie; Jones, Lisa Ann
Subject: RE: Noise-related MEQ funding proposals

Hi Sharlene,

[redacted]

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[redacted]

Cheers,
Cathryn

From: Shaikh, Sharlene
Sent: 2018–August-15 10:59 AM
To: Murray, Cathryn
Cc: Brekke, Heather; Hannah, Lucie; Jones, Lisa Ann
Subject: RE: Noise-related MEQ funding proposals

Hi Cathryn,

Lisa and I spoke to Elly yesterday about this funding and she mentioned she would be reaching out to you guys ☺

[redacted]

Thanks for keeping us in the loop – super useful to stay coordinated on all of these moving pieces!

Cheers,
Sharlene

From: Murray, Cathryn
Sent: August-15-18 9:55 AM
To: Shaikh, Sharlene
Cc: Brekke, Heather; Hannah, Lucie
Subject: Noise-related MEQ funding proposals

Hi Sharlene,

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Cheers,
Cathryn

Cathryn Clarke Murray, PhD

Senior Aquatic Biologist
Fisheries and Oceans Canada
Institute of Ocean Sciences
9860 West Saanich Road
Sidney, BC, Canada
Email cathryn.murray@dfo-mpo.gc.ca Phone +1-250-363-3001

Government of Canada / Gouvernement du Canada

Canada

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s.21(1)(a)

s.21(1)(b)

AP RM#	Recovery Measures
AP RM #	Recovery Measures

Pages 2878 to / à 2881
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

s.21(1)(a)
s.21(1)(b)

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Wong, Eva

From: Shepherd, Pippa
Sent: August-15-18 3:49 PM
To: Kenyon, Robyn
Cc: Brekke, Heather
Subject: FW: IAMC - SARA presentations
Attachments: TMX_SARA_June142018_FPPedits.ppt

Hi Robyn,

I can update the Bull Trout slides and add White Sturgeon slides and content to the ppt next week. Will you be able to attend the meeting? I'm not terribly conversant in the species... But I also know you have crazy steelhead deadlines! Thx, P

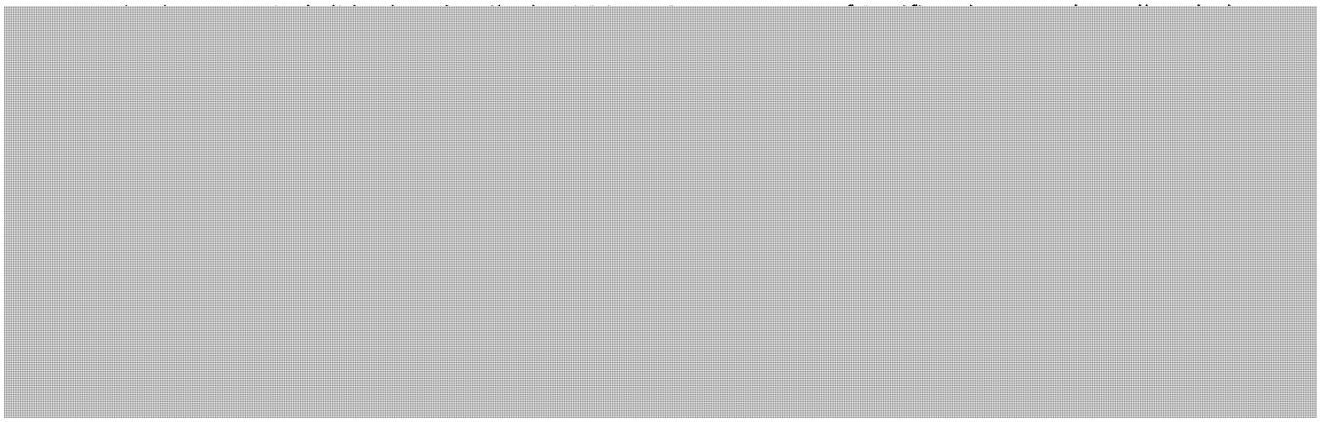
Pippa Shepherd, PhD
A/Team Lead – Freshwater / Chef d'équipe p. i. – eaux douces
Species at Risk / Espèces en Péril
Fisheries and Oceans Canada / Pêches et Océans Canada
Pippa.Shepherd@dfo-mpo.gc.ca / 604-666-5813

From: Bonamis, Alston
Sent: Wednesday, August 15, 2018 3:40 PM
To: Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>
Cc: Kenyon, Robyn <Robyn.Kenyon@dfo-mpo.gc.ca>; Shepherd, Pippa <Pippa.Shepherd@dfo-mpo.gc.ca>; Sandgathe, Tracey L <Tracey.Sandgathe@dfo-mpo.gc.ca>; Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>
Subject: RE: IAMC - SARA presentations

Hello Karen,

The September TMX-IAMC meeting is confirmed for **September12th and 13th in Lac Ste. Anne, Alberta** (near Edmonton). FPP has reviewed the draft SARA presentation that was prepared for this meeting and has made some minor edits. Although the content is largely unchanged, there are a few points for review and comment, detailed below:

- Since the presentation was first prepared, the SRKW Imminent Threat Assessment was released and there have been updates to the Marine Mammal Regulations. The SRKW slide may need updating with relevant points from these two documents, especially in light of recent media coverage of J-Pod.



002882

s.21(1)(a)
s.21(1)(b)
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[redacted]

At the meeting, we will definitely require DFO staff who can speak to bull trout, steelhead and Interior Fraser Coho. It may be advisable to have a SRKW recovery planner present at the meeting as well, given the recent media attention. I anticipate that we will have the floor for presentations and Q&A for at least 1-2 hours.

Thank you,
Alston

From: Sandgathe, Tracey L
Sent: Thursday, July 26, 2018 1:09 PM
To: Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>
Cc: Kenyon, Robyn <Robyn.Kenyon@dfo-mpo.gc.ca>; Shepherd, Pippa <Pippa.Shepherd@dfo-mpo.gc.ca>; Bonamis, Alston <Alston.Bonamis@dfo-mpo.gc.ca>
Subject: RE: IAMC - SARA presentations

Thank you Karen and SARA team. I will be away on leave shortly, but Alston will be in touch.
Tracey

From: Leslie, Karen
Sent: July-26-18 12:08 PM
To: Sandgathe, Tracey L
Cc: Kenyon, Robyn; Shepherd, Pippa; Bonamis, Alston
Subject: RE: IAMC - SARA presentations

Hi Tracey –

[redacted]

Cheers,
K

Karen Leslie
604-666-0395

From: Sandgathe, Tracey L
Sent: 2018–July-13 12:58 PM
To: Leslie, Karen
Subject: IAMC - SARA presentations

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Karen, as discussed previously, DFO will be presenting on species at risk at the next TMX Indigenous Advisory and Monitoring Committee meeting. The meeting is planned for September 12-13th. We are not sure which day will have species at risk on the agenda, but we should have about three hours and we will be working with BC and with C&A's SARA program. The National Aboriginal Council on Species at Risk may also present.

We will do some additional meetings and scoping, but your team has already assisted in drafting a presentation for the meeting. Are you able to commit some staff to present on fresh water and SRKW? I could get Alston to speak with Pippa if that makes sense regarding logistics. The meeting may be in Kamloops, not clear yet. We have a travel budget if that is an issue.

Tracey Sandgathe, B.A., LL.B., LL.M.
Fisheries Protection Program
Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Tracey.Sandgathe@dfo-mpo.gc.ca
Tel: (604) 666-0129 / Cell: [redacted]

Programme de la protection des pêches
Direction des ecosystems
Pêches et Océans Canada / Gouvernement du Canada
Tracey.Sandgathe@dfo-mpo.gc.ca
Tel: (604) 666-0129 / Cell: [redacted]

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Aquatic Species at Risk and the Trans Mountain Expansion Project

Fisheries and Oceans Canada
IAMC Meeting
Lac Ste. Anne, Alberta
September 12-13, 2018

Canada

002885

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s.21(1)(a)

s.21(1)(b)

Outline

- *Species at Risk Act* (SARA) & Listing Process
- [redacted]
- Questions

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What is the *Species at Risk Act* (SARA)?

- **Federal legislation, purpose is to:**
  - Prevent wildlife from becoming extinct in Canada
  - Secure recovery of Extirpated, Endangered, Threatened species
  - Manage species of Special Concern to prevent from becoming further at risk
- **Applies to:**
  - Listed wildlife in Canada (including fish and marine mammals)
  - All federal lands and waters in Canada
- **Responsible Departments and Agencies:**
  - Environment and Climate Change Canada (terrestrial species)
  - Fisheries and Oceans Canada (aquatic species)
  - Parks Canada (species found in lands administered by Parks)

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What is COSEWIC?

- Committee on the Status of Endangered Wildlife in Canada (COSEWIC)
- Independent advisory panel to Assess the status of wildlife species at risk of extinction
- Members are wildlife biology experts from academia, government, non-governmental organizations and the private sector

COSEWIC Designations:

Not at Risk	•The population is healthy and self-sustaining
Data Deficient	•Not enough information is available to determine the species' status
Special Concern	•May become Threatened or Endangered due to a combination of biological characteristics and identified threats
Threatened	•Likely to become endangered if nothing is done to reverse the factors leading to extirpation or extinction
Endangered	•Imminent extirpation or extinction
Extirpated	•No longer exists in Canada, but exists elsewhere in the world
Extinct	•No longer exists

002888

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How are species listed under SARA?

COSEWIC ASSESSMENT

Undertaken by COSEWIC

SARA LISTING ADVICE

- Recovery Potential Assessment
- Management Scenarios
- Socio-economic Analysis
- Consultations
- Listing recommendation

For aquatic species, undertaken by DFO, in consultation with First Nations and Stakeholders

Decision by Governor in Council, not DFO or ECCC

DO NOT LIST

- Not a SARA file
- Managed under alternative regulatory approach

LIST

Extirpated, Endangered, Threatened

- Protected status, Recovery Strategy & Action Plan, Critical Habitat

Special Concern

- Management Plan only, no protections or Critical Habitat

REFER BACK TO COSEWIC

Reassessment
(where information supports a change in COSEWIC status)

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AQUATIC SPECIES AT RISK AND THE TRANS MOUNTAIN EXPANSION PROJECT

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SOUTHERN RESIDENT KILLER WHALE

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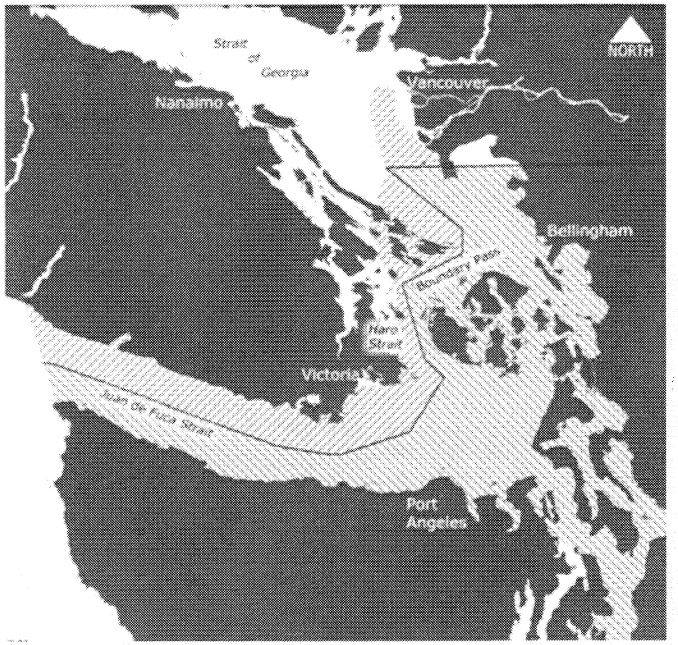
Southern Resident Killer Whale (SRKW)

- **SARA Status:** Listed, Endangered
- **Potential Interactions with Trans Mountain Expansion:**
  - Threat: Reduced prey (Chinook)
    - nearshore tendencies render them more vulnerable to pollution
  - Threat: Physical/acoustic disturbance
    - Increased tanker traffic
  - Threat: Contaminants
    - Potential for spills
  - Critical habitat: Shipping routes overlap
- **Key SARA recovery activities**
  - Action Plan (2017) identifies 98 specific recovery measures to address the key threats

Critical Habitat for Southern Resident Killer Whales



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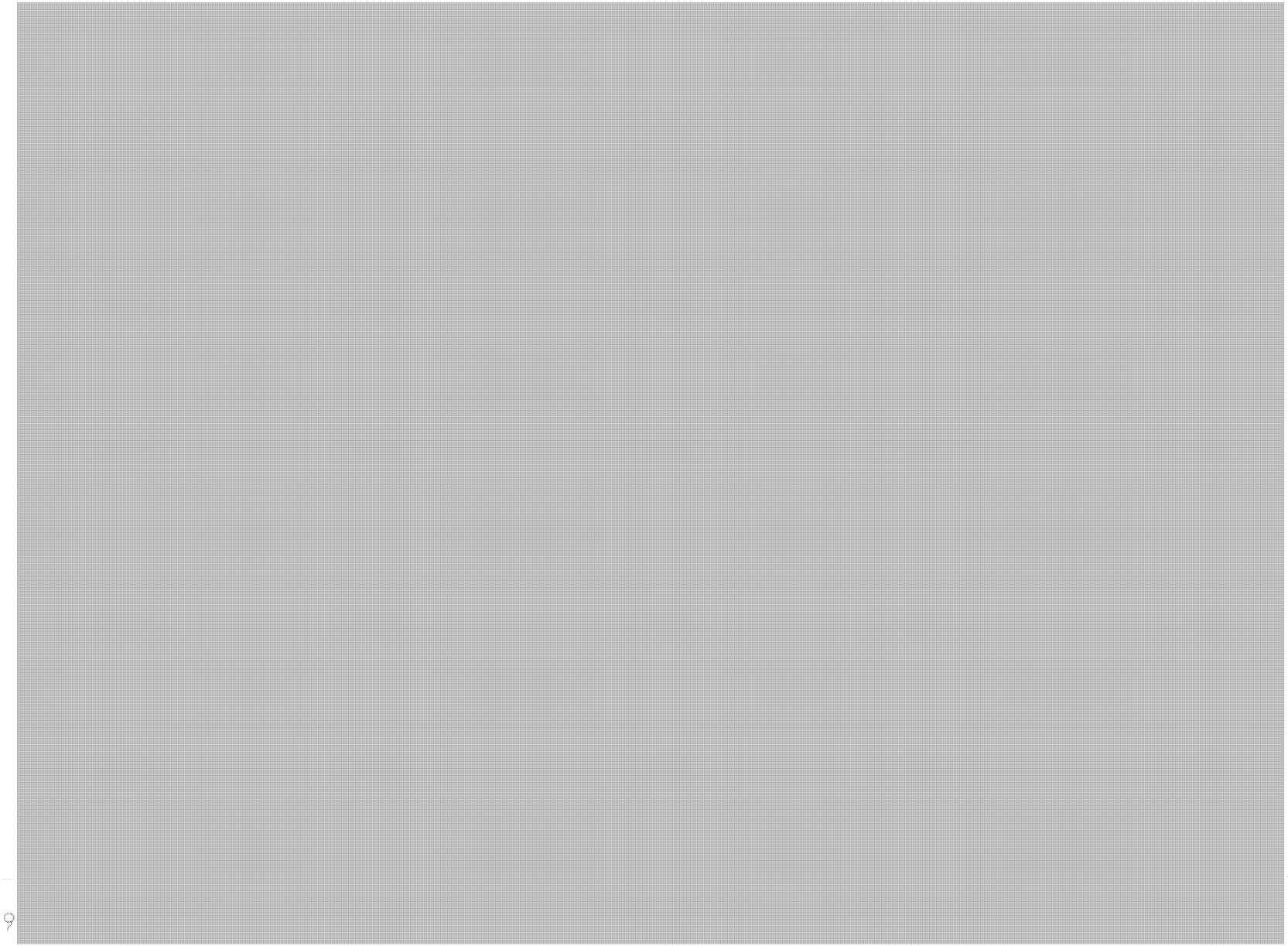
s.21(1)(a)

s.21(1)(b)



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s.21(1)(a)

s.21(1)(b)

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s.21(1)(a)
s.21(1)(b)
s.69(1)(g) re: (a)
s.69(1)(g) re: (e)

s.21(1)(a)
s.21(1)(b)
s.69(1)(g) re: (a)
s.69(1)(g) re: (e)

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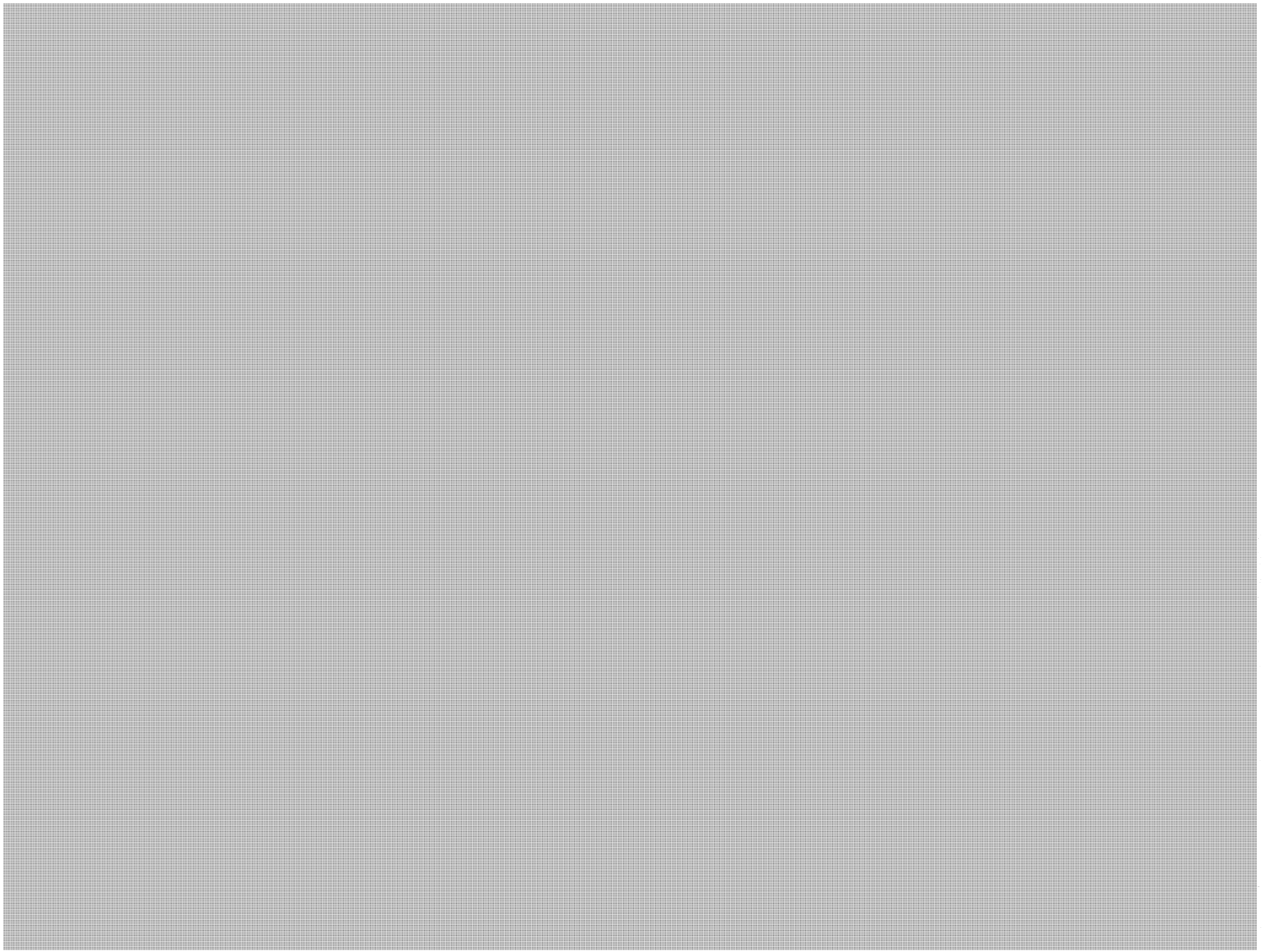
s.21(1)(a)
s.21(1)(b)
s.69(1)(g) re: (a)
s.69(1)(g) re: (e)



Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

s.21(1)(a)
s.21(1)(b)

[redacted]

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

[redacted]

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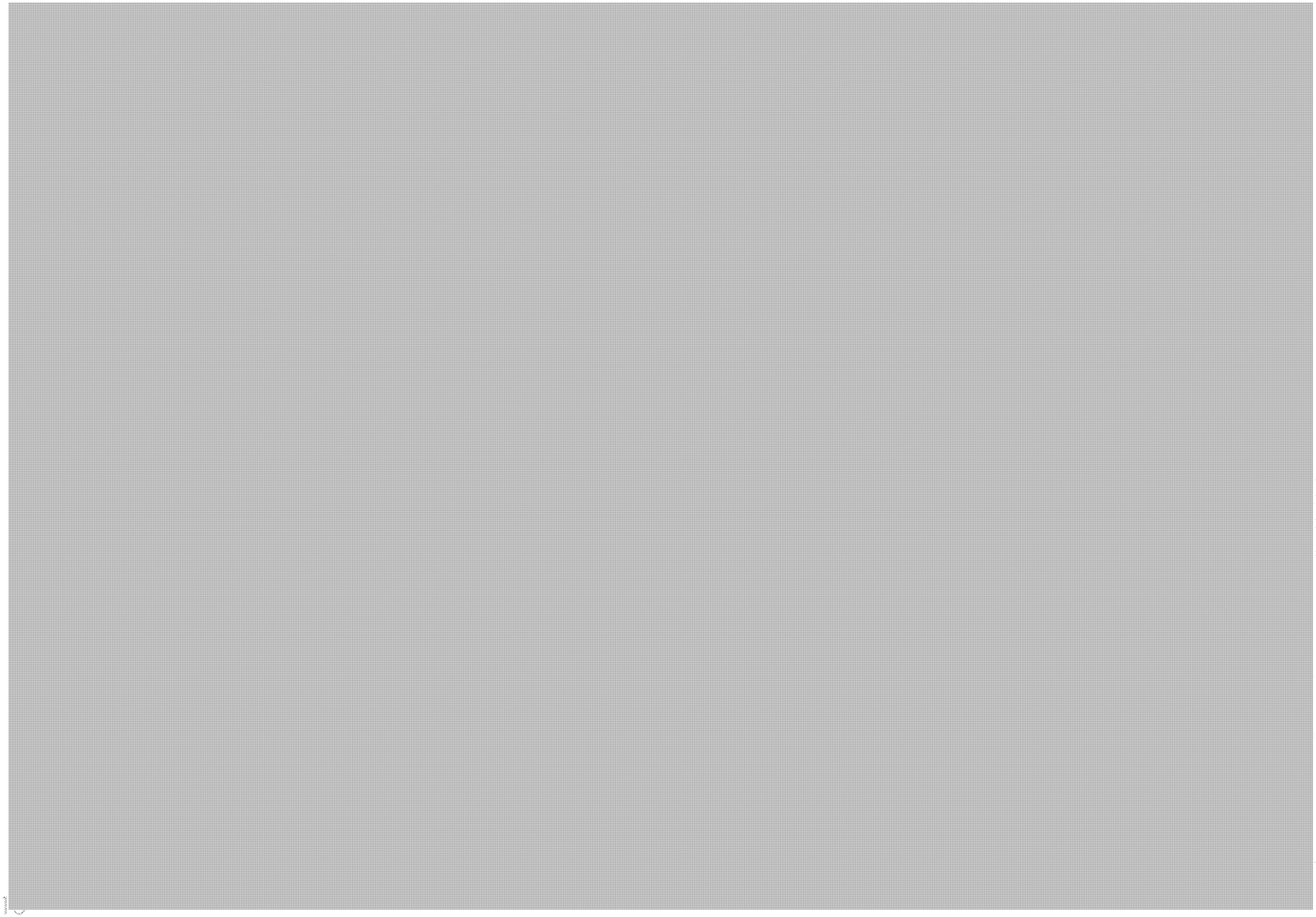
s.21(1)(a)

s.21(1)(b)



s.21(1)(a)
s.21(1)(b)
s.69(1)(g) re: (a)
s.69(1)(g) re: (e)

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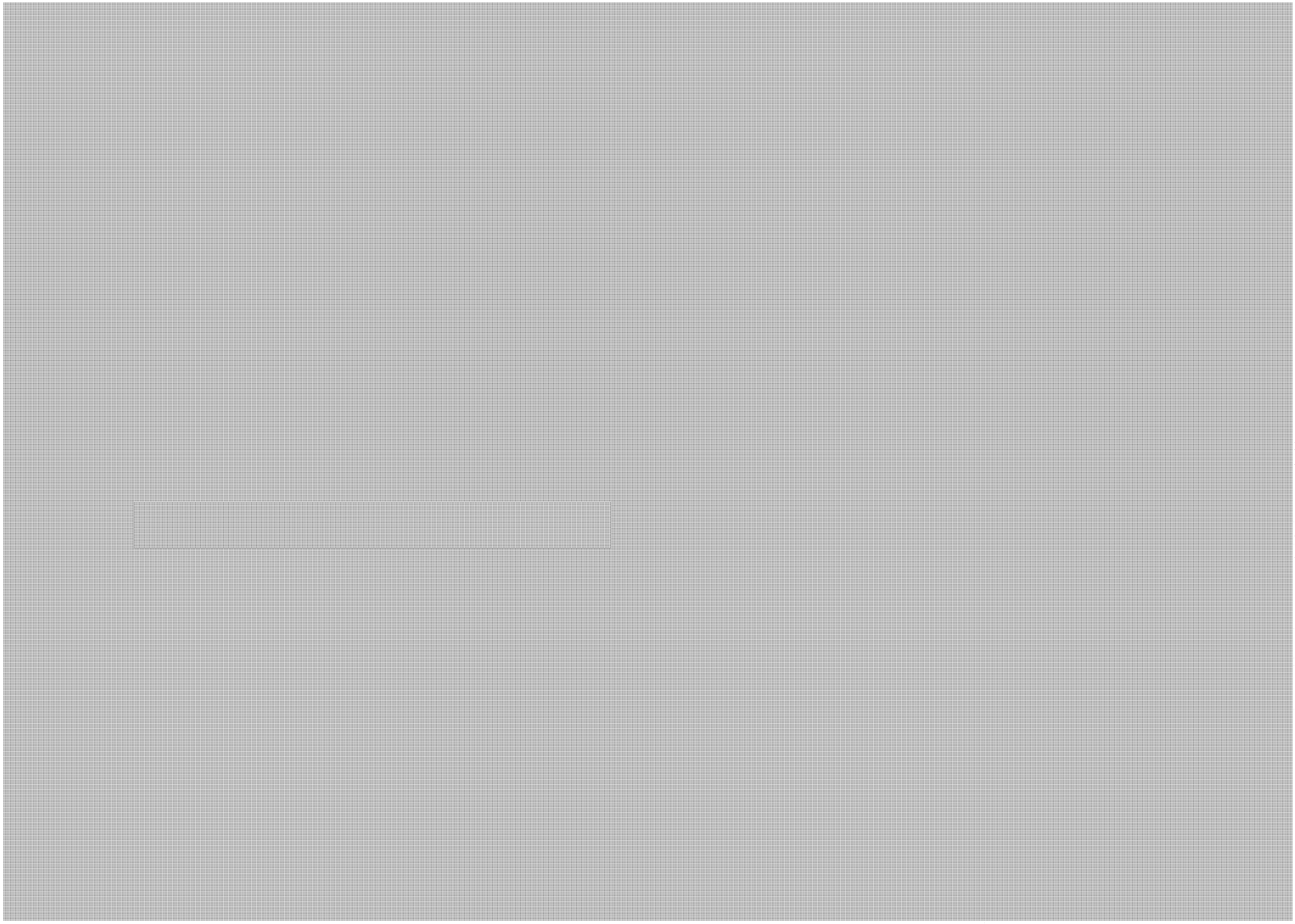

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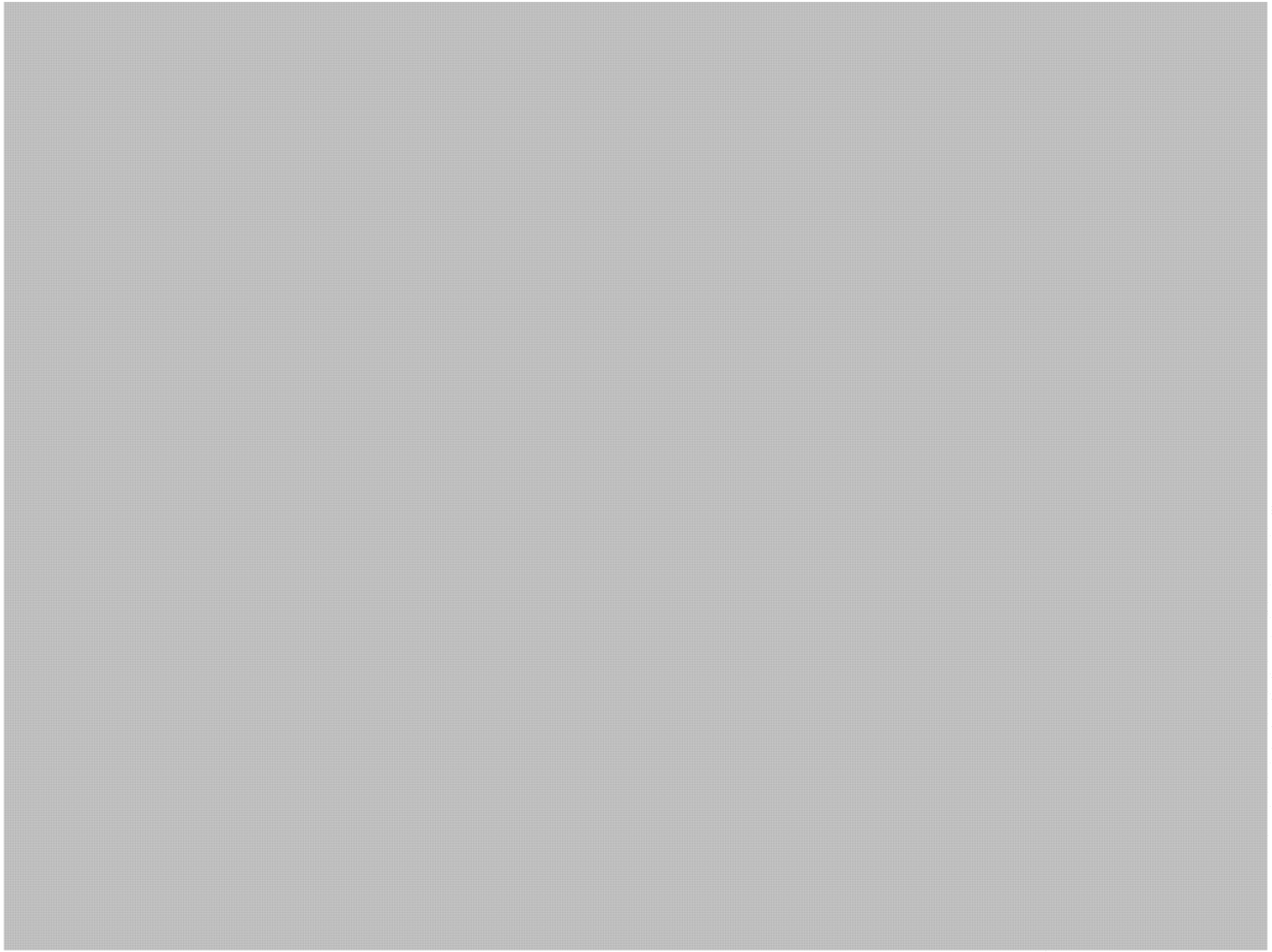
s.21(1)(a)

s.21(1)(b)



s.21(1)(a)
s.21(1)(b)

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

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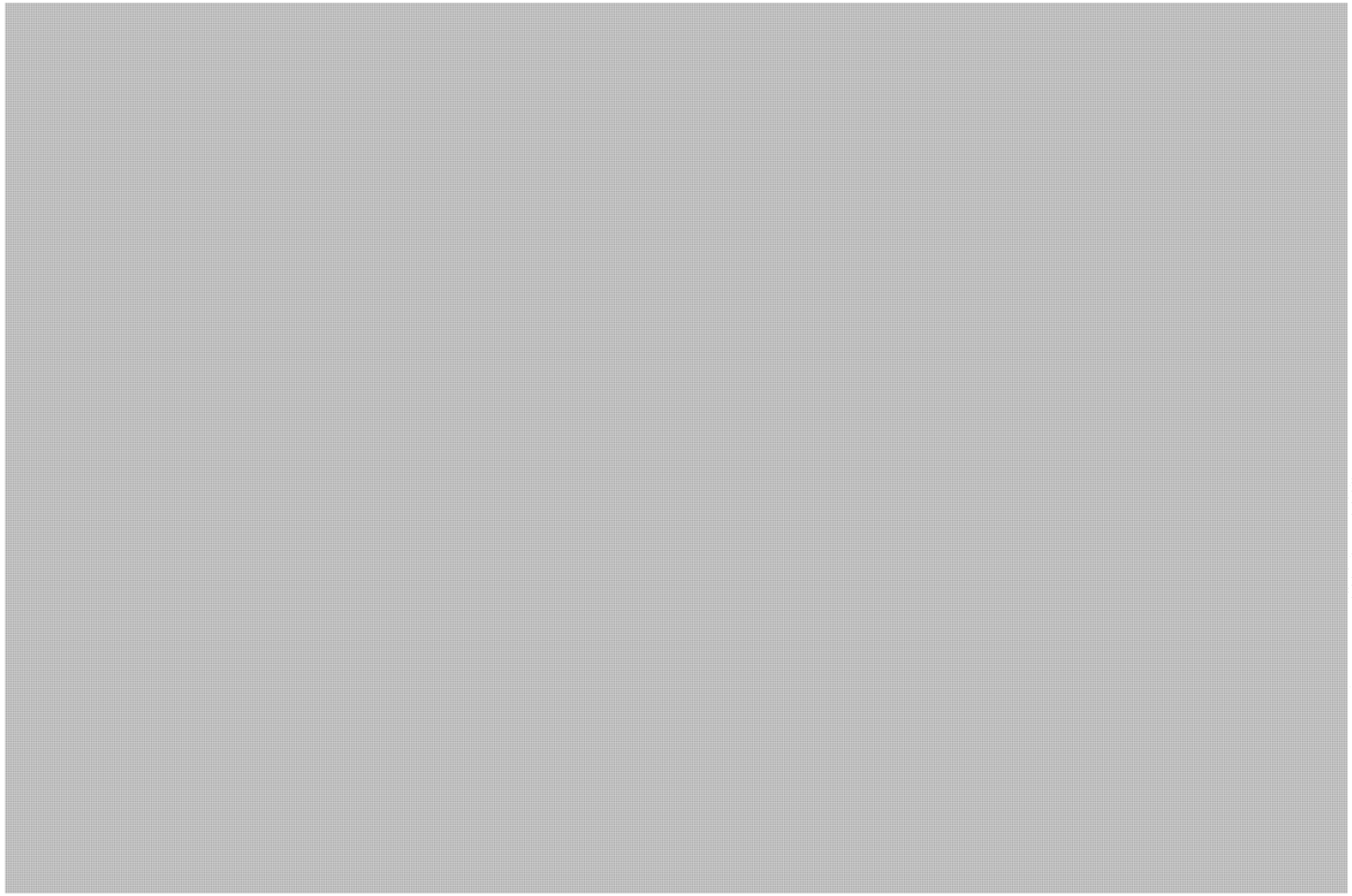
s.21(1)(a)

s.21(1)(b)



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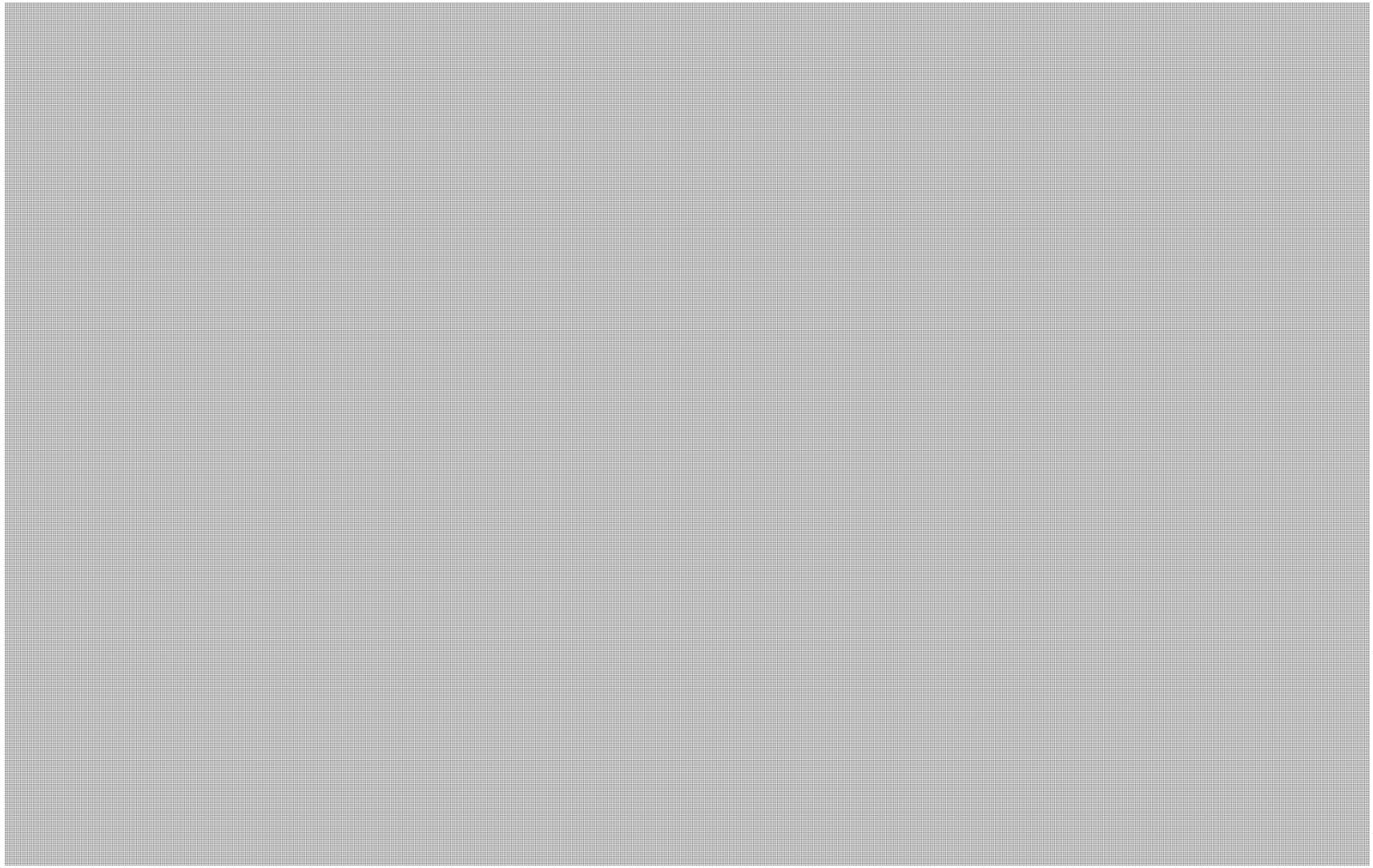
s.21(1)(a)

s.21(1)(b)



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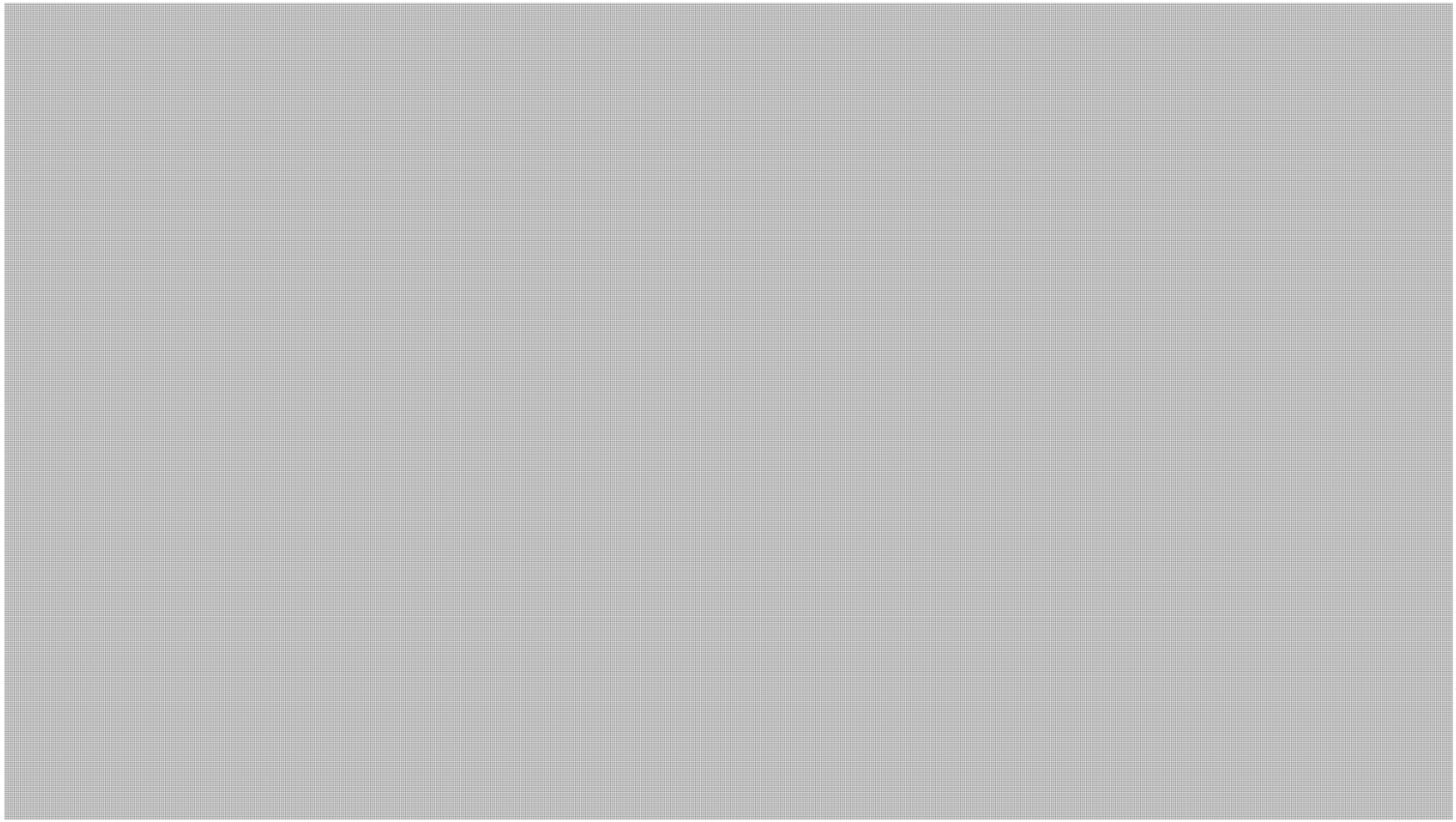
s.21(1)(a)

s.21(1)(b)



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s.21(1)(a)

s.21(1)(b)

Opportunities to Provide Input

- SRKW consultation on Recovery Strategy amendment in spring/summer 2018

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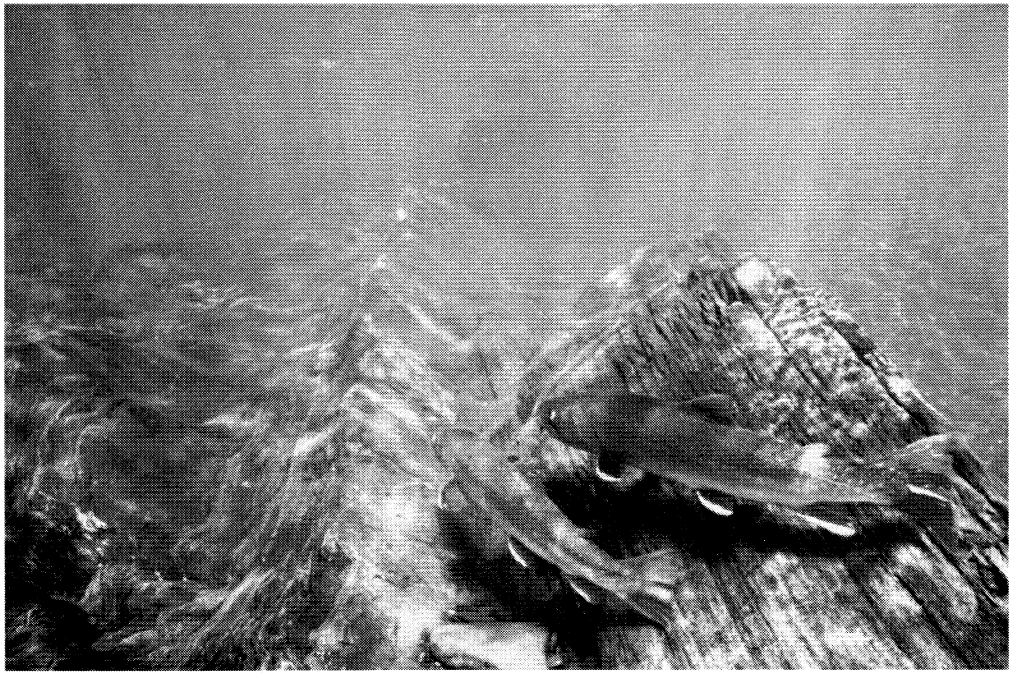
Questions?



Contact Pacific Region SARA Program at: sara@xpac.dfo-mpo.gc.ca

002907

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Wong, Eva

From: Malikian, Janine
Sent: August-15-18 3:58 PM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: FW: For review: Updated media lines/Qs and As - RKW amended Recovery Strategy
Attachments: QA_AmendedRecoveryStrategy_RKW_Aug15.docx

Importance: High

Hi Heather,

Not sure if you're in today.

If not today, could you get any edits to me by tomorrow morning please? Need to move this quickly through approvals here, then NHQ to be ready for Friday.

Thanks,

Janine

From: Malikian, Janine
Sent: August-15-18 12:05 PM
To: Brekke, Heather
Subject: For review: Updated media lines/Qs and As - RKW amended Recovery Strategy

Hi Heather,

Here are the lines for your review. I updated the Issue section and made a few edits to the lines (highlighted).

If you can think of additional questions that may come up during the public comment period, please add them.

Thanks,

Janine

s.21(1)(a)

s.21(1)(b)

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DRAFT

KEY MESSAGES / QUESTIONS AND ANSWERS

Consutation On Proposed Amended Recovery Strategy For Northern And Southern Resident Killer Whales

Pages 2910 to / à 2912

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21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

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Dozie, Juachi

From: Brekke, Heather
Sent: August-15-18 12:32 PM
To: Jones, Lisa Ann; McMillan, Christie
Subject: FW: For review: Updated media lines/Qs and As - RKW amended Recovery Strategy
Attachments: QA_AmendedRecoveryStrategy_RKW_Aug15.docx

Can you please review and let me know if you have any suggested edits?

Thanks
Heather

From: Malikian, Janine
Sent: August-15-18 12:11 PM
To: Brekke, Heather
Subject: For review: Updated media lines/Qs and As - RKW amended Recovery Strategy

Hi Heather,

Here are the lines for your review. I updated the Issue section and made a few edits to the lines (highlighted).

If you can think of additional questions that may come up during the public comment period, please add them.

Thanks,

Janine

Pages 2914 to / à 2917

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pages 2909 to / à 2912

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Dozie, Juachi

From: Brekke, Heather
Sent: August-15-18 3:00 PM
To: pac.prmc / pac.urpcm (DFO/MPO)
Subject: RE: Draft_Reply_2018-001-01635.docx
Attachments: MECTS-#3952192-v2-Draft_Reply_2018-001-01635_hb.docx

Hi Candace,

Please see my suggested edits attached.

Best
Heather

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: August-15-18 1:12 PM
To: Brekke, Heather
Subject: Draft_Reply_2018-001-01635.docx

Hi Heather.

This response was drafted mainly from previously approved text.

In Karen Leslie's absence, we are looking for your approval to use the material in response to this new incoming **by 1:30pm Thursday, but sooner if at all possible. If you have no substantial edits, we will return the draft to Ottawa or to the appropriate Director for signature and distribution without further regional approvals**.

If the material needs to be updated, please use track changes to insert any necessary edits in the attached document, and FORWARD the draft to XPAC PRMCU. We will get further approvals, including your supervisory chain.

Your review should also include technical accuracy and consistency with policy direction.

If you think someone else must see it before you can approve, **please advise us and we will forward**.

Thanks,
Alison

Please direct all e-mails regarding 001 and 501 correspondence to XPAC PRMCU.

Candace McGuire, Heather Fowlie & Alison Jacques

Managers, Pacific Region Ministerial Correspondence Unit
Fisheries and Oceans Canada/Government of Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823 Fax: 604-666-8956

Gestionnaires de la correspondance ministériel
Pêches et Océans Canada/Gouvernement du Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823, télécopieur 604-666-8956

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Ministerial Correspondence / Correspondance ministérielle Approval Form / Formulaire d'approbation

MCCU DOCKET # / N° DU DOSSIER UCCM : 2018-001-01635	MCCU CONTACT / RESPONSABLE À L'UCCM :
REPLY BY MINO / RÉPONSE DU MINISTRE	

DATE AND DEADLINES / DATE ET ÉCHÉANCE

DUE DATE TO MINO / ÉCHÉANCE AU CM : (mm-dd-yyyy / mm-jj-aaaa)	/2018	DATE RECEIVED IN MCCU / DATE DE RÉCEPTION À L'UCCM : (mm-dd-yyyy / mm-jj-aaaa)	/2018

COMMENTS / APPROACH – COMMENTAIRES / APPROCHE

Drafted from approved text: 2018-001-01016 (standard response re chinook management measures)

APPROVALS / APPROBATIONS

Level / Niveau	Name, Title and Sector / Nom, titre et secteur	Assigned Date / Date fixée	Date Due / Échéance	Date Approved / Date d'approbation	Changes / Modifications
3 FM - Salmon	Jeff Grout Resource Manager, Salmon, Fisheries Management Branch			August 15, 2018	Yes
2 EM - SARA	Heather Brekke, for: Karen Leslie Manager, Species at Risk Program, Ecosystem Management Branch			August 15, 2018	Yes
	Approvals needed in Ottawa? Yes / No				
IF NECESSARY / SI NÉCESSAIRE					
Regional Director General / Directeur(trice) général régional(e)	Rebecca Reid, Regional Director General, Pacific Region				
ADM / RDG / DC / CO / AC SMA / DGR / SA / BC / CA					
Indigenous Affairs / Affaires autochtones Legal / Services juridiques IGA / AI					
IF / SI PROVINCIAL / TERRITORIAL					
DM / SM					
PCO / BCP					

OTHER CONSULTATIONS / AUTRES CONSULTATIONS

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•	• Manager, Ministerial Correspondence, Pacific Region
OGD / AMG - (Name, Title, Branch, Date / Nom, titre, direction, date)	
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b.c.c. / Cci – (Name, Department / Nom, ministère)	c.c. – (Name, email address / contact info / Nom, courriel, coordonnées)
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ATTACHMENTS TO RESPONSE / PIÈCES JOINTES À LA RÉPONSE
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Pages 2921 to / à 2922

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

s.16(2)

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Khanna, Sukriti

From: Cormie, Mya
Sent: August-15-18 7:40 AM
To: Cottrell, Paul
Subject: RE: J-pod

Hi Paul,

Dave and Jordan are out in Renfrew today, but won't have a boat with them. Feel free to give the trailer a call if you need to get in touch with them, as they may check messages if they stop in there for lunch. The number is [redacted]

Thanks,

Mya

From: Cottrell, Paul
Sent: Tuesday, August 14, 2018 9:32 AM
To: Ludlow, Mandy <Mandy.Ludlow@dfo-mpo.gc.ca>; Cormie, Mya <Mya.Cormie@dfo-mpo.gc.ca>; Jansen, Willi <Willi.Jansen@dfo-mpo.gc.ca>; Blacklock, Cam <Cam.Blacklock@dfo-mpo.gc.ca>; Cauffope, Genevieve <Genevieve.Cauffope@dfo-mpo.gc.ca>
Cc: Parker, Rhonda <Rhonda.Parker@dfo-mpo.gc.ca>
Subject: J-pod

Hi All,
Just wanted to give an update on J-pod. They were last seen off Port Renfrew yesterday afternoon by Strait watch. Likely will be hanging out off Swiftsure somewhere today. NOAA is off the water until Thursday. Strait Watch and Sound watch will be on the water today.
Best,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

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Pages 2924 to / à 2926

are not relevant

sont non pertinentes

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-15-18 10:16 AM
To: Raverty, Stephen AGRI:EX
Subject: RE: J50 sample results

Thanks Stephen,
Really appreciate being on the email threads so up to date on things.
Best,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Raverty, Stephen AGRI:EX [Stephen.Raverty@gov.bc.ca]
Sent: Wednesday, August 15, 2018 10:14 AM
To: Jones, Simon; 'Nollens, Hendrik'
Cc: Cottrell, Paul
Subject: RE: J50 sample results

Fantastic thank you Simon, this is very helpful, we have not routinely been looking at fecal samples in live animals and unfortunately, have not consistently identified helminths in post mortem case material.
Will keep you posted..
Kindest regards,
Stephen

From: Jones, Simon [mailto:Simon.Jones@dfo-mpo.gc.ca]
Sent: Wednesday, August 15, 2018 10:12 AM
To: Raverty, Stephen AGRI:EX; 'Nollens, Hendrik'
Cc: Cottrell, Paul
Subject: RE: J50 sample results

Hi Stephen,

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Larval Contracaecum, as is the case with and other anisakid nematodes (i.e., Anisakis, Hysterothylaceum, Pseudoterranova), are found in a wide range of fish host species. The presence of Contracaecum spp eggs indicates the presence of mature nematodes in the GI tract, which in turn indicates the whale is (or has been) feeding – but does not help to determine whether the animal has a narrow or broad range of fish species in its diet. I assume DNA testing of the faecal sample has been considered for species ID?

Does the statement "high levels of Contracaecum spp eggs" imply that the level of eggs is greater than one would expect? Egg burden relates to the level of GI infestation which can be a function of feeding success, prey species and the health status of J50 (an immunocompromised host may permit greater infestations).

Thanks for asking my opinion. I wish I could have provided something more substantial.

Best,
Simon

Simon R.M. Jones
Aquatic Animal Health Section
Pacific Biological Station
Fisheries and Oceans Canada
3190 Hammond Bay Road
Nanaimo, British Columbia
V9T 6N7, Canada
Tel: 250 729 8351
Fax: 250 756 7053
E-mail: simon.jones@dfo-mpo.gc.ca
https://profils-profiles.science.gc.ca/en/profile/simon-jones

https://scholar.google.ca/citations?user=JIvmjCwAAAAJ&hl=en

From: Raverty, Stephen AGRI:EX [mailto:Stephen.Raverty@gov.bc.ca]
Sent: August-15-18 8:30 AM
To: 'Nollens, Hendrik'
Cc: Jones, Simon; Cottrell, Paul
Subject: RE: J50 sample results

Hi Simon,
A fecal sample was recovered from the 4 year old kw, J50 and parasitology identified high levels of Contracaecum spp eggs. Would you have any insights into the possible role of chinook salmon as an intermediate host or whether this finding may suggest a broader range of prey selection by this animal? Due to the generalized emaciation of J50, there is some question as what this animal may be consuming.
Thank you and I hope all is well.
Stephen

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-15-18 2:15 PM
To: Greene, Annely
Subject: Re: J50 Science Evaluation

It is a letter of authorization so no signature required. They just have to acknowledge receipt, apparently.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Greene, Annely
Sent: Wednesday, August 15, 2018 1:39 PM
To: Cottrell, Paul
Subject: RE: J50 Science Evaluation

K, was there any follow up email from Science at all authorizing the SE or just verbal approval? Also I have a copy of the licence and an email from Dr. Rowles stating that he/she accepts the licence and provisions, was there any actual signing of the licence? I want to make sure the file is complete.

From: Cottrell, Paul
Sent: August-15-18 1:30 PM
To: Greene, Annely; Thornton, Sheila
Cc: Davis, Neil
Subject: Re: J50 Science Evaluation

The evaluation was done over conference calls because of the quick turn around time required. It was a unique situation. So the standard form was not used.
Thanks,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Greene, Annely
Sent: Wednesday, August 15, 2018 1:22 PM
To: Cottrell, Paul; Thornton, Sheila
Cc: Davis, Neil
Subject: J50 Science Evaluation

Hi there, could one of you please forward me the signed Science Evaluation for J50. I require it for the files. Thanks, Annely

---

From: Cottrell, Paul
Sent: August-09-18 7:16 AM
To: Lowe, Carmel; Thornton, Sheila
Cc: Davis, Neil; Thomson, Andrew; Greene, Annely
Subject: FW: Action Plan for J50

Hi Sheila/Carmel,
Attached is the science evaluation review form for the NOAA proposal.
Cheers,

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Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Cottrell, Paul
Sent: Thursday, August 09, 2018 6:24 AM
To: Teri Rowles - NOAA Federal
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson; Davis, Neil; Thomson, Andrew; Lowe, Carmel; Thornton, Sheila; Greene, Annely
Subject: RE: Action Plan for J50

Hi Teri,
Thank-you so much. Our DFO science folks will evaluate the proposal and resource management will work to draft a licence in anticipation of approval. I have attached a licence application which will need to be completed. Please complete asap so we can draft licence.
Thanks again,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

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Vancouver, BC

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(604) 666-9965

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From: Teri Rowles - NOAA Federal [redacted]
Sent: Wednesday, August 08, 2018 4:41 PM
To: Cottrell, Paul
Cc: Deborah Fauquier - NOAA Affiliate; Sarah Wilkin - NOAA Federal; Kristin Wilkinson; Brad Hanson
Subject: Action Plan for J50

Paul/Sheila, Please see the attached action plan/application for J50 response activities for your review for operations in Canada. Kristin, Brad and I are available to answer questions and clarifications if you have them. We based this plan on the proposal which you have been sent and the discussions with the response team yesterday.

Please let us know if you have additional needs or things need clarification. I am in Austin TX for a review meeting but should have access to email throughout my time here.

THANK YOU

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-15-18 2:26 PM
To: Moore, Kendra
Subject: Re: Update on SRKW?

Hi Kendra,
Just heard J50 was spotted last night off Carmanha near Nitnat West coast of Vancouver Island.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Moore, Kendra
Sent: Wednesday, August 15, 2018 1:19 PM
To: Cottrell, Paul
Subject: RE: Update on SRKW?

Great thanks Paul. I will send that along as a confirmation on no new news.

Kendra

From: Cottrell, Paul
Sent: August-15-18 4:17 PM
To: Moore, Kendra
Subject: Re: Update on SRKW?

Hi Kendra,
J-pod has not bee seen since and we assume they are off the West Coast of Vancouver Island or off Cape Flattery. So no new news for you.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Moore, Kendra
Sent: Wednesday, August 15, 2018 11:39 AM
To: Cottrell, Paul
Subject: Update on SRKW?

Hi Paul,

I was wondering if there is any further update on J-pod, other than your comment below:

NOAA is off water until Thursday. J-pod was last seen off Port Renfrew WCVI yesterday afternoon by Strait watch. J-50 was observed but J-35 was not. Animals were spread out and viewing conditions challenging. It is likely J-pod will be offshore in the Swiftsure area today. The fog and weather will make locating challenging.

My managers are inquiring on further updates.

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Thanks so much,

Kendra

No further information has been removed or severed from this page

s.19(1)
s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Davis, Neil
Sent: August-15-18 10:38 AM
To: Kennedy, Eddy
Cc: Cottrell, Paul; Holmes, John
Subject: RE: Question re Science presence to monitor SRKW

Ok I could do 1230

From: Kennedy, Eddy
Sent: Wednesday, August 15, 2018 10:29 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Holmes, John <John.Holmes@dfo-mpo.gc.ca>
Subject: Re: Question re Science presence to monitor SRKW

I am tied up between 1 and 3:30 and have to leave for an appointment soon after that. I am free between 12 and 1
Eddy

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Davis, Neil
Sent: Wednesday, August 15, 2018 10:24 AM
To: Kennedy, Eddy
Cc: Cottrell, Paul
Subject: RE: Question re Science presence to monitor SRKW

Hi Eddy

Can we try to chat this afternoon between 1-3 sometime? I'll probably ask Paul to call in if he is available, though he's in the field, so we'll have to see. Paul, I'll try to call you beforehand, likely sometime close to noon if that works for you

---

From: Kennedy, Eddy
Sent: Wednesday, August 15, 2018 9:10 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: Re: Question re Science presence to monitor SRKW

Neil, we should touch base today. [redacted]
Eddy

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Davis, Neil
Sent: Tuesday, August 14, 2018 7:32 AM
To: Lowe, Carmel; Thomson, Andrew
Cc: Kennedy, Eddy
Subject: Re: Question re Science presence to monitor SRKW

s.19(1)

s.20(1)(c)

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Tough to say, but maybe we ought to have a chat across science and FM about resources and what we think we can and should string together so we are coordinated in what we dedicate to this. I'll find out what Paul has allocated for the MM Unit

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Lowe, Carmel
Sent: Monday, August 13, 2018 4:52 PM
To: Thomson, Andrew; Davis, Neil
Cc: Kennedy, Eddy
Subject: Question re Science presence to monitor SRKW

Do either of you know how long Science needs to maintain monitoring for? We extended contract for [redacted] of funds we do not have a source for yet... so clearly we don't want to be monitoring longer than required.

Carmel

Sent from my BlackBerry 10 smartphone on the Rogers network.

s.19(1)
s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Davis, Neil
Sent: August-15-18 1:26 PM
To: Kennedy, Eddy
Cc: Cottrell, Paul; Holmes, John
Subject: RE: Question re Science presence to monitor SRKW

Managed to chat w Paul C. [redacted]

From: Kennedy, Eddy
Sent: Wednesday, August 15, 2018 10:29 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Holmes, John <John.Holmes@dfo-mpo.gc.ca>
Subject: Re: Question re Science presence to monitor SRKW

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Cc: Cottrell, Paul
Subject: RE: Question re Science presence to monitor SRKW

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s.19(1)

s.20(1)(c)

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From: Davis, Neil
Sent: Tuesday, August 14, 2018 7:32 AM
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Cc: Kennedy, Eddy
Subject: Re: Question re Science presence to monitor SRKW

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Sent: Monday, August 13, 2018 4:52 PM
To: Thomson, Andrew; Davis, Neil
Cc: Kennedy, Eddy
Subject: Question re Science presence to monitor SRKW

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Carmel

Sent from my BlackBerry 10 smartphone on the Rogers network.

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-15-18 10:00 AM
To: Davis, Neil
Subject: RE: On water monitoring plans

Hi Neil,
Any work we (the MMU) are doing with the current SRKW monitoring we are piggy backing with work on the killer whale tracking network in the Gulf islands and really relying on Straitwatch and others to locate J-pod and if in Canadian waters and within range and weather conditions (ie wind, waves, fog) are ok, then responding if required. I am playing a coordinating role with the Straitwatch, CP, Soundwatch and NOAA folks. This has been very important to only put resources in motion if required. It is a very dynamic situation as you can appreciate which has required significant planning and organization. Our science MM folks were covering off a small but important range area of Sooke to Port Renfrew and west. J-pod was not sighted yesterday and was likely off the WCVI. I`ll give you a call.
Cheers,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Davis, Neil
Sent: Wednesday, August 15, 2018 9:48 AM
To: Cottrell, Paul
Subject: On water monitoring plans

Hi Paul

I'm having a discussion w science about how we can make the most efficient use of our on water monitoring resources for srkw this summer, ideally coordinating between MMU and sci to stretch our budgets as far as they can go. Can we talk about where you're at w resources available to MMU and what you're expecting over the balance of the summer?

Sent from my BlackBerry 10 smartphone on the Rogers network.

s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Brekke, Heather
Sent: August-16-18 10:35 AM
To: Malikian, Janine
Cc: Jones, Lisa Ann; McMillan, Christie
Subject: RE: For review: Updated media lines/Qs and As - RKW amended Recovery Strategy
Attachments: Lateral displacement trial starts Monday August 20th; QA_AmendedRecoveryStrategy_RKW_Aug15_hb.docx

Hi Janine,

Suggested edits are attached. I've included a few comments for consideration as well,

Best
Heather

From: Malikian, Janine
Sent: August-15-18 3:58 PM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: FW: For review: Updated media lines/Qs and As - RKW amended Recovery Strategy
Importance: High

Hi Heather,

Not sure if you're in today.

If not today, could you get any edits to me by tomorrow morning please? Need to move this quickly through approvals here, then NHQ to be ready for Friday.

Thanks,

Janine

From: Malikian, Janine
Sent: August-15-18 12:05 PM
To: Brekke, Heather
Subject: For review: Updated media lines/Qs and As - RKW amended Recovery Strategy

Hi Heather,

Here are the lines for your review. I updated the Issue section and made a few edits to the lines (highlighted).

If you can think of additional questions that may come up during the public comment period, please add them.

Thanks,

Janine

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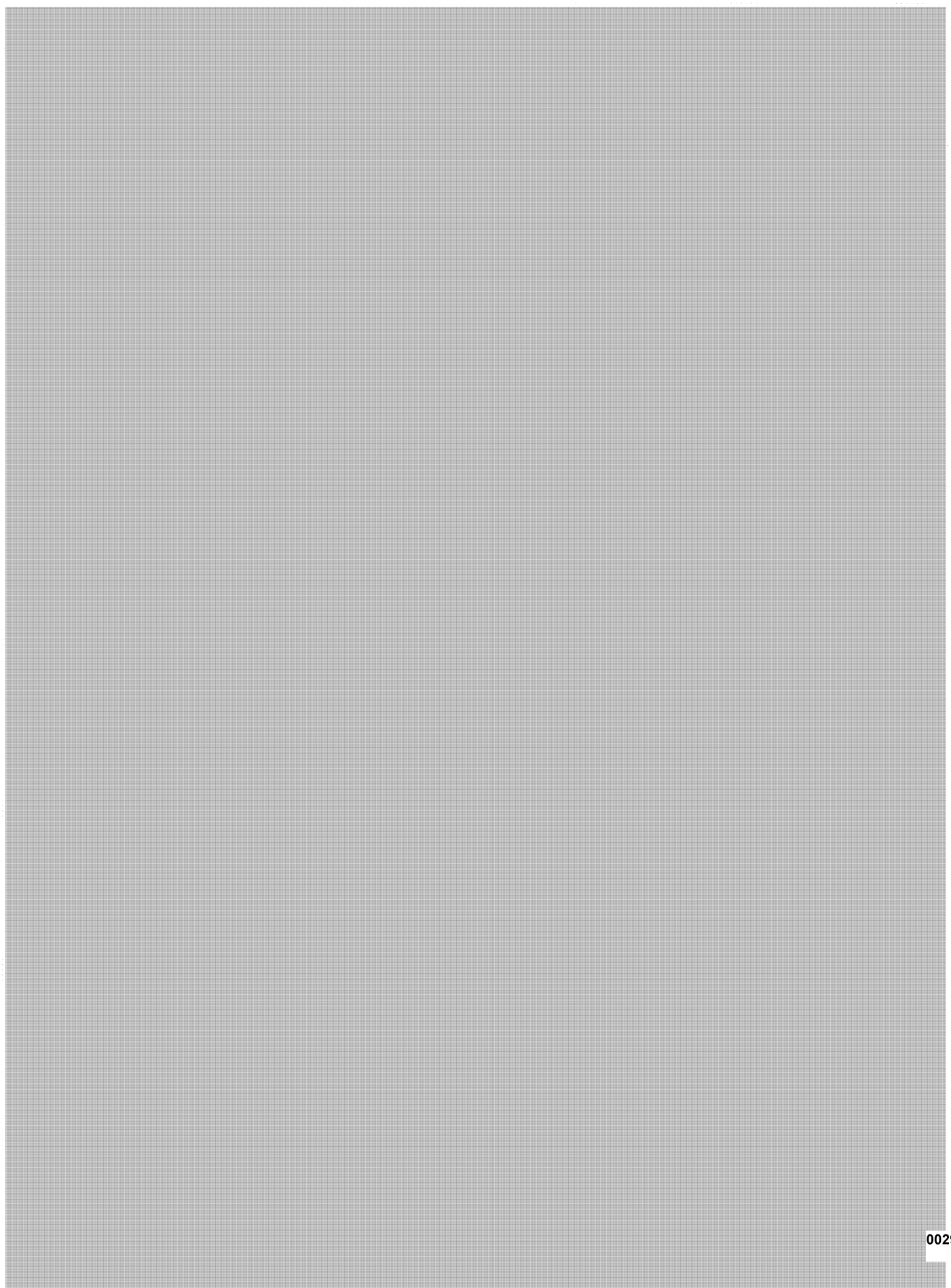
s.21(1)(a)

s.21(1)(b)

DRAFT

News Release



Pages 2941 to / à 2942

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21(1)(b), 21(1)(a)

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s.16(2)
s.21(1)(a)
s.21(1)(b)

Mbarushimana, Jenny

From: Davis, Neil
Sent: August-16-18 12:10 PM
To: Brekke, Heather; Harber, Lee
Subject: RE: SRKW Deck
Attachments: MECTS-#3953240-v1-Current_Issues_Deck_-August_2018-SRKW_hb ND.PPT

Thanks Heather. [redacted] Lee pls fwd to NHQ

From: Brekke, Heather
Sent: Thursday, August 16, 2018 12:06 PM
To: Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: RE: SRKW Deck

Additional slide added (slide 6) on the SARA aRS (CH) consultation.

[redacted] email sent this am).

Cheers
Heather

From: Harber, Lee
Sent: August-16-18 11:34 AM
To: Brekke, Heather; Davis, Neil
Subject: FW: SRKW Deck

Please review, NHQ needs our input by noon. tx

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Moore, Kendra
Sent: 2018–August-16 11:19 AM
To: Harber, Lee; Gilchrist, Brett; Scott, Paul G; Thorleifson, Erika
Subject: SRKW Deck

Hi all,

Attached is the deck for your review. Please provide comments asap.

Thanks,

Kendra Moore

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Senior Fisheries and Aquaculture Management Officer |
Agente Principale, Gestion des pêches et de l'aquaculture
Integrated Resource Management | Gestion intégrée des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
Kendra.moore@dfo-mpo.gc.ca
Tel: ***New*** 613-290-2344

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s.19(1)

Southern Resident Killer Whale: Indigenous and Multi-Stakeholder Advisory Group – Participant List

Sector	Name	Affiliation	Phone Number	Caller	Contacted
Indigenous representatives		UBC			
		First Nations Summit			
		FNFC			
		FNFC			
		FNFC			
NGOs		Raincoast Conservation Foundation			
		Georgia Strait Alliance			
		WWF Canada			
		David Suzuki Foundation			
		Natural Resources Defence Council			
		Vancouver Aquarium [Oceans Wise / CORI Team]			
Shipping Industry		Port of Vancouver			
		Shipping Federation of Canada			
		Chamber of Shipping			
		Canadian Ferry Association			
Fishing Industry		Sport Fishing Advisory Board			
		BC Seafood Alliance			
Whale Watching		Pacific Whale Watching Association			
Provincial Government	Mark Zacharias	Ministry of Environment and Climate Change Strategy			

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Southern Resident Killer Whale: Indigenous and Multi-Stakeholder Advisory Group – Participant List

	Jennifer McGuire (alternate)	Environmental Sustainability Division			
Municipal Government		Metro Vancouver Regional District			

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Current SRKW Issues

August 16, 2018

Canada

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SARA Status

- Listed as **Endangered** under *Species at Risk Act* (SARA) in 2003
  - *Endangered – species is facing imminent extirpation or extinction*
- Found around southern Vancouver Island predominantly in summer and fall (some all year round)
- Travel in family units with a complex social structure
- Highly vulnerable
  - Small and declining population (75 individuals)
  - Long lived, late sexual maturity, low reproductive rate
  - Narrow prey preference (primarily Chinook salmon, Chum salmon seasonally important)
  - Fixed range (competition and low food availability)
  - Close to large urban centres, high exposure to anthropogenic threats

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Three Key, Inter-related Threats

- **Lack of prey availability**
  - Includes both declines in prey populations and lower foraging success rates
- **Acoustic and physical disturbance**
  - Includes underwater vessel noise and vessel strikes
- **Environmental and biological contaminants**
  - Includes persistent organic pollutants and pathogens

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Oceans Protection Plan

- $1.5 billion Oceans Protection Plan (OPP) is the largest investment ever made to protect Canada's coasts and waterways
- World-leading marine safety system that provides economic opportunities for Canadians
- Preserving and restoring Canada's marine ecosystems
- In collaboration with Indigenous peoples, local stakeholders and coastal communities

Initiatives:

- Science-based review
- Coastal Restoration Fund - habitat requirements
- Establishing marine environmental quality standards
- Enhanced marine mammal response

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Whales Initiative

- Budget 2018 includes $167.4 million over five years to help protect and recover endangered whale species in Canada, notably the SRKW, NARW, and SLEB.

- Targeted at addressing threats from human activities under the mandate of DFO, TC and ECCC, e.g. entanglement, ship strikes, noise disturbance, contaminants

Initiatives:

- Fisheries management measures
- Speed restrictions and vessel re-routing
- Reduce disturbance from underwater noise
- Enhancing monitoring underwater and in air
- Compliance and stronger enforcement
- Building partnerships for action- intra-governmental and intergovernmental

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Critical Habitat (CH)

- Proposed amended Recovery Strategy for RKW in Canada anticipated to be posted to SAR Registry on August 24, 2018 for a 60-day national comment period
- The amended Recovery Strategy identifies two additional areas as proposed CH and provides additional clarification of the functions, features, and attributes for all critical habitat identified for both NRKW and SRKW
- The regional external review included concerns raised by Indigenous groups and recreational harvesters amongst others on the perceived impacts of the designation of the new areas on their fisheries
- The posting of the proposed document is anticipated to generate a lot of media and similar concerns to be raised by Indigenous and fishing groups
- Any delays in finalizing the Amended Recovery Strategy will make it very difficult to meet the Dec 2018 commitment to Ecojustice for posting the Order to CGII

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Outreach

- **Let's Talk Whales**
  - DFO scientists completed a review of current recovery activities for each of these 3 whales, including SRKW.
  - Government of Canada engaged stakeholders, First Nations and the public on how we can work together to best implement recovery actions for these whales. This was done through:
    - in-person stakeholder meetings
    - an online public engagement
    - written submissions

- **SRKW Symposium**
  - Important milestone to contribute to the collective understanding of the threats facing the SRKW and the actions needed for their protection and recovery.

- **SRKW Indigenous and Multi-Stakeholder Advisory Group**
  - Advisory Group established by the federal departments of DFO, TC, and ECCC to bring together Indigenous groups and multiple stakeholders to facilitate communication and coordination of activities to recover SRKW.
  - Next meeting at end of October 2018, focusing on prey availability

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Recent Focus

- **Mar 2017 - Northern and Southern RKW Action Plan finalised**
  - Required under SARA, development led by DFO.
  - Identifies 98 Recovery Measures under the 5 Broad Strategies to address threats and recover both populations.

- **Apr 2017 - Science Based Whale Review – Ocean Protection Program**
  - Science-based review of the efficacy of recovery measures to date.
  - Identified 5 additional recovery measures, plus the additional threat of Vessel Strikes

- **Jan 2018 – Petition for Emergency Protection Order**
  - Calls upon federal government to take immediate action to address key threats to SRKW and consider a SARA Emergency Protection Order

- **May 2018 - Finding of Imminent Threat**
  - Ministers find SRKW faces imminent threats to survival and recovery.

- [redacted]

Canada

s.69(1)(g) re: (a)
s.69(1)(g) re: (e)

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Fisheries Management Measures

- Prey availability is one of the primary threats for SRKW
- DFO imposed fishery management measures to reduce total harvest of Chinook salmon (primary prey) by 25-35 per cent
- Closure of three key Southern resident killer whale foraging areas to commercial and recreational salmon fishing
  - Strait of Juan de Fuca and Gulf Islands, and partial closures in the mouth of Fraser River
- Increasing scientific research, monitoring and funding additional research on prey availability;
- Review of 2018 management measures will take place in fall 2018
  - identify industry impacts, SRKW protection and inform 2019

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Disturbance Measures

- **New Marine Mammal Regulations**
  - Enhanced protection for marine mammals, including the requirement for boats to maintain a minimum approach distance of 200 m from all killer whales.
  - Authorization under the amended MMRs used recently to support collaborative approach to respond to J50.

- **Marine Mammal Response Program**
  - Enhanced capacity to respond to marine mammal incidents Canada's coasts, including:
    - DFO committed $1 million in support of marine mammal response operations.
    - Creating regional whale hubs in Pacific and Atlantic Regions;
    - Developing capacity within Indigenous communities to provide response activities under the program, including capacity to support necropsies of mortalities to investigate causes of death; and,
    - Identification and tracking of types of marine mammal response incidents, such as entanglement in fishing gear or stranding.

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Noise Management Measures

- Physical and acoustic disturbance is one of the primary threats to SRKW
- Voluntary slowdown for commercial vessels in Southern Resident killer whale foraging habitat
  - Partnership with ECHO program
- Lateral displacement of commercial shipping vessel traffic away from foraging habitat
- Development of noise management plans for domestic vessel fleet
  - Starting wit h BC Ferries
- Increased education and awareness for recreational boaters to reduce their impacts
- Increased underwater listening to detect whales, noise impacts and effectiveness of management measures

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Contaminants Measures

- Increased enforcement of regulations that address contamination, and enhanced control of contaminants of concern.
- Research on Contaminants in SRKW and their Prey
  - New resources to address gaps in Canada's ability to assess and track sources and levels of contaminants of concern impacting whales and their prey.
  - DFO to improve understanding of:
    - impacts of contaminants on killer whales,
    - levels of contamination, and
    - the main direct sources of whale contaminants through prey sampling

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Monitoring and Enforcement

- **National Aerial Surveillance Program (NASP)**
  - Increasing National Aerial Surveillance Program aircraft capacity
    - One additional aircraft for a total of four
    - State-of-the-art radar, camera and communications systems for entire fleet
    - Additional crews, fuels, maintenance, etc.
    - Operational in summer 2019
    - NASP's whale role is growing and may include support to amended *Marine Mammal Regulations*

- **Fisheries Aerial Surveillance and Enforcement (FASE)**
  - Aerial surveillance patrols by fishery officers will be increased by 30 per cent to enforce fisheries closures and distances of vessels around whales.

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Going Forward

- Federally, plan to continue multi-pronged federal approach to addressing main threats – in areas of federal jurisdiction

- Opportunity for both levels of government to investigate potential opportunities for federal-provincial collaboration in areas of provincial and shared jurisdiction
  - More holistic approach resulting in more effectiveness for species and ecosystem

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Wong, Eva

From: Malikian, Janine
Sent: August-16-18 10:24 AM
To: Brekke, Heather
Cc: Webb, Cheryl
Subject: FW: News release: Crisis situation for endangered killer whales needs emergency response

Heather – FYI. Joint news release from the David Suzuki Foundation and the Raincoast Conservation Foundation calling for the closure of chinook fishing and suspension of whale-watching around SRKW.

Along the same lines, petitions on their websites:

https://www.raincoast.org/2018/08/fisheries-closures-needed-for-killer-whales/

https://davidsuzuki.org/action/save-starving-salish-sea-orcas/?sp_ref=437535565.392.190059.t.0.2

Cheers,

Janine

From: [redacted](Times-Colonist) [mailto:[redacted]
Sent: 2018–August-16 9:23 AM
To: Davies, Leri
Subject: FW: News release: Crisis situation for endangered killer whales needs emergency response

Good morning, Leri –

I'm wondering if DFO will have a response to this today?

Best regards,

[redacted]
Victoria Times Colonist
[redacted]

From: David Suzuki Foundation [mailto:media@davidsuzuki.org]
Sent: Thursday, August 16, 2018 9:13 AM
To: [redacted](Times-Colonist)
Subject: News release: Crisis situation for endangered killer whales needs emergency response

News release from the David Suzuki Foundation and Raincoast Conservation Foundation

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Crisis situation for endangered killer whales needs emergency response

Conservation groups call for Chinook fisheries closures and whale-watching restrictions for southern residents

Date: August 16, 2018

VANCOUVER — Critically endangered southern resident killer whales now require immediate closure of Chinook fisheries on B.C.'s coast and closure of all whale watching, according to the David Suzuki Foundation and the Raincoast Conservation Foundation.

"If an orca mother's prolonged display of grief and signs of starvation among J-pod don't inspire action, what will? We're in a crisis situation that requires an emergency response," said Jay Ritchlin, Western Canada director general for the David Suzuki Foundation.

Scientists and reviews by Fisheries and Oceans Canada agree that the biggest threat to the whales is a lack of abundance of and access to Chinook salmon, their favoured prey. The groups are calling on Minister of Fisheries and Oceans Jonathan Wilkinson to immediately close recreational and commercial marine Chinook fisheries. The closure will make more Chinook available to whales and will help the salmon return to their streams of origin to reproduce and ultimately rebuild. It is seen as the most effective way to reduce nutritional stress, improve birth rates and survival and reduce deaths for the southern residents.

"Recent events with J-pod, one of the three southern resident pods, has underscored the dire plight of these whales. What should be a healthy population of killer whales is failing to successfully feed, grow and reproduce. Given the federal government's failure to implement adequate threat reduction, we are calling for a closure of marine, commercial and recreational Chinook fisheries. This is the whales' best chance for survival," said Misty MacDuffee, biologist and wild salmon program director with Raincoast Conservation Foundation. As of August 2018, there have been no successful births in three years for the southern residents.

There is also a call for a closure of recreational and commercial whale watching that targets the endangered whales. "New distance regulations don't go far enough to limit disturbance to these whales as they forage for prey. We must limit vessel disturbance so there's a possibility that future generations will also be able to experience these whales," Ritchlin said.

The only exceptions to the full marine Chinook fishery closures would be for fisheries outside of the range of the whales and closer to spawning grounds that can demonstrate they are meeting biologically defined wild Chinook escapement targets (i.e., enough fish are returning to spawning grounds to replenish the stocks adequately).

Wild Chinook populations are in trouble. Those returning to the Fraser River before July have collapsed and 86 per cent of wild conservation units, a measurement for populations, in southern B.C. are at risk. B.C. fisheries also catch a number of endangered U.S.-bound Chinook salmon that are important to southern resident killer whales. Similar actions restricting fisheries and whale watching are also needed on the U.S. side of the border.

There is no rebuilding plan for the many highly depleted wild B.C. Chinook populations. Scientific evidence shows that artificial production of Chinook salmon, through operations such as hatcheries, can harm wild Chinook and are not suitable for rebuilding stocks.
Funding enforcement and monitoring of whale-protection measures is also needed, according to the organizations, which referred to steps taken by the government so far as partial and inadequate, voluntary, yet to begin and/or lacking timelines.

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Between 1.5 and 2 million Chinook salmon are caught each year by Canadian and U.S. fisheries under the Pacific Salmon Treaty. The southern resident population requires about 1,400 Chinook each day to stay alive.

-END-

More information and media contacts:

David Suzuki Foundation
Jay Ritchlin, Director General, Western Canada
[redacted] Tel: 604 961 6840

Raincoast Conservation Foundation
Misty MacDuffee, Biologist and Wild Salmon Program Director
[redacted] Tel: 250 818 2136

Chris Genovali, Executive Director
[redacted] Tel: 250 888 3579

Backgrounder:

An emergency order under the Species at Risk Act
Southern resident killer whales are recognized as endangered under Canada's Species at Risk Act.

In May, the federal government concluded these whales face imminent threats to their survival and recovery, requiring a response under the Species at Risk Act. Five organizations — the David Suzuki Foundation, Georgia Strait Alliance, the Natural Resources Defence Council, Raincoast Conservation Foundation and WWF Canada — petitioned the minister of fisheries and oceans and minister of the environment and climate change through Ecojustice to recommend an emergency order to protect the whales. The petition identified measures including the creation of feeding refuges closed to fishing, rebuilding depleted Chinook populations, limits to whale-watching, and regulatory measures to address underwater noise from shipping. In addition to immediate measures on Chinook fishing and whale watching outlined above, these measures must be in place by next year.

Rather than recommend an emergency order, the ministers took limited and inadequate steps such as implementing fisheries closures in some of the whales' foraging areas and clarifying that commercial and recreational whale watchers must stay 200 metres from killer whales. These actions were not supported by adequate enforcement or monitoring, and the other actions announced are voluntary, research-oriented, yet to begin and/or lack specific timelines.

The science
Studies indicate the whales had a 25 to 50 per cent risk of extinction by the end of the century under conditions that were present prior to 2014. Those conditions have since worsened.

Nearly 70 per cent of detected pregnancies between 2008 and 2014 failed due to nutritional stress associated with lack of prey.

Research by an international team of scientists, including Raincoast staff, showed that a modelled 30 per cent increase in the coast-wide Chinook abundance above the 1979-2008 average could increase southern resident growth rate by as much as 1.9 per cent (Lacy et al., 2017). When noise and disturbance are addressed along with Chinook abundance, population viability modelling shows that a 15 per cent increase in the coast-wide abundance, coupled with a 50 per

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cent reduction in vessel noise and disturbance, can meet the U.S. recovery target of 2.3 per cent annual growth (based on SRKW demographics to 2014, Lacy et al. 2017).

Source: Lacy, R.C., R. Williams, E. Ashe, K.C. Balcomb, L.J. N. Brent, C.W. Clark, D.P. Croft, D.A. Giles, M. MacDuffee and P.C. Paquet. 2017. Evaluating anthropogenic threats to endangered killer whales to inform effective recovery plans. *Scientific Reports* 7, Article no: 14119 doi:10.1038/s41598-017-14471-0

Whale watching

Over the past two decades, 14 to 28 boats routinely followed southern residents in the summer months, with peak numbers exceeding 70 boats (see Ashe et al. 2010, Soundwatch 2016). The presence and noise from these vessels reduces foraging activity and limit the whales' ability to acquire prey (Lusseau et al. 2009, Noren et al. 2009, Williams et al. 2014, Lacy et al. 2017, Holt et al. 2017).

Vessel traffic and noise is known to increase the duration and amplitude of calls and is likely to adversely affect the whales by masking and altering vital communication calls.

A full marine Chinook fishery closure along B.C.'s coast is needed because:

- Given very poor returns of most Chinook salmon, and the need for Chinook by critically endangered orca, all marine fisheries for Chinook should be immediately closed.
- Monitoring of the recreational fishery is too limited to effectively manage reducing the number of fish each fisher is allowed to take. Only a full closure will ensure adequate enforcement.
- A Chinook rebuilding plan that includes habitat restoration is needed to restore wild Chinook salmon abundance at the population level.
- Hatcheries are not an effective rebuilding tool because they most often do more harm to wild salmon rather than enhancing wild populations. Hatcheries are not a substitute for rebuilding wild Chinook stocks to feed whales, which is what is needed now.
- Feeding refuges should be expanded and apply to all other fishing to ensure these whales have the space they need to forage and are sheltered from vessel disturbance so that they can catch their prey.

This email was sent to [redacted]
David Suzuki Foundation, 219-2211 West 4th Ave, Vancouver, British Columbia V6K4S2, Canada
Unsubscribe

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Dozie, Juachi

From: Brekke, Heather
Sent: August-16-18 3:30 PM
To: Harber, Lee; Davis, Neil
Subject: RE: Situation Report for DM August 17
Attachments: MECTS-#3952364-v1-Situation_Report_for_DM_17Aug2018_hb.docx

Hi there,

A few minor changes attached. Also for consideration, should we include something on the petition noted earlier today?

Thanks
Heather

From: Harber, Lee
Sent: August-16-18 3:18 PM
To: Davis, Neil; Brekke, Heather
Subject: RE: Situation Report for DM August 17

Hi Neil, Heather,

I've added a few updates in track changes. If you can please review and we can send up to Andy. It is due to Alexis by 10am tomorrow.

Thanks
Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

From: Thomson, Andrew
Sent: 2018–August-16 9:09 AM
To: Harber, Lee
Subject: FW: Situation Report for DM August 17

Lee

Can you update as required.

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

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From: Van Bemmel, Alexis
Sent: Thursday, August 16, 2018 8:21 AM
To: Goetze, Darren <Darren.Goetze@dfo-mpo.gc.ca>; Perry, Jacqueline <Jacqueline.Perry@dfo-mpo.gc.ca>; Lambert, Robert <Robert.Lambert@dfo-mpo.gc.ca>; Valkenier, Mary-Ellen <Mary-Ellen.Valkenier@dfo-mpo.gc.ca>; Doucet, Serge <Serge.Doucet@dfo-mpo.gc.ca>; Vincent, Patrick <Patrick.Vincent@dfo-mpo.gc.ca>; Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>; McPherson, Arran <Arran.McPherson@dfo-mpo.gc.ca>; Laverdure, Louise <Louise.Laverdure@dfo-mpo.gc.ca>; Morel, Philippe <Philippe.Morel@dfo-mpo.gc.ca>; Pelletier, Mario <Mario.Pelletier@dfo-mpo.gc.ca>; Lick, Gregory <Gregory.Lick@dfo-mpo.gc.ca>; Hubley, Marian <Marian.Hubley@dfo-mpo.gc.ca>; 'mike.beale@canada.ca' <mike.beale@canada.ca>; marc.diorio@canada.ca; Goodier, Gwen (EC) <gwen.goodier@canada.ca>; Spicer, Mary-Ann (EC) <mary-ann.spicer@canada.ca>; Marshall, Christopher (EC) <christopher.marshall@canada.ca>; 'natasha.rascanin@tc.gc.ca' <natasha.rascanin@tc.gc.ca>; Weldon, Jane <jane.weldon@tc.gc.ca>; Jackson, Ashley <Ashley.Jackson@dfo-mpo.gc.ca>; Sanders , Michelle <michelle.sanders@tc.gc.ca>; Landry, Jean <Jean.Landry@dfo-mpo.gc.ca>; TC.MSSWhales <TC.MSSWhales-BaleinesSSM.TC@tc.gc.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>; Dwyer, Judy <Judy.Dwyer@dfo-mpo.gc.ca>; Hill, Jonathan <Jonathan.Hill@dfo-mpo.gc.ca>; Sicard, Marc <Marc.Sicard@dfo-mpo.gc.ca>; MacDonald, Jeff (NCR) <Jeffery.MacDonald@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; Brisebois, Luc <luc.brisebois@tc.gc.ca>; Blanchard, Tony <Tony.Blanchard@dfo-mpo.gc.ca>; Bouchard, Nicole <Nicole.Bouchard@dfo-mpo.gc.ca>; Werszko, Elizabeth <elizabeth.werszko@tc.gc.ca>; Bliss, Doug <Doug.Bliss@dfo-mpo.gc.ca>; Slaney, LLoyd <Lloyd.Slaney@dfo-mpo.gc.ca>; LeBlanc, Denise <Denise.LeBlanc@dfo-mpo.gc.ca>; Finn, Ray <Ray.Finn@dfo-mpo.gc.ca>; Pike, Kelly J <Kelly.Pike@dfo-mpo.gc.ca>; Cahill, Paul <Paul.Cahill@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Smith, Darlene <Darlene.Smith@dfo-mpo.gc.ca>; Bettencourt, Tracy <Tracy.Bettencourt@dfo-mpo.gc.ca>; Goulet, Yves <Yves.Goulet@dfo-mpo.gc.ca>
Cc: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Subject: RE: Situation Report for DM August 17

Hi everyone,

Please find attached a draft sit rep for the DM. Again, this one is pretty light, so input on your respective issues will be very much appreciated! Please provide to me by 10am EST tomorrow.

Many thanks,
Alexis

Alexis Van Bemmel
Fisheries and Aquaculture Management Officer |
Agent, Gestion des pêches et de l'aquaculture
Fisheries and Oceans | Pêches et océans
200 rue Kent Street - 13S002A Ottawa, ON, K1A 0E6
Alexis.VanBemmel@dfo-mpo.gc.ca
Telephone | Téléphone (613) 402-7832
Facsimile | Télécopieur (613) 990-7051
Government of Canada | Gouvernement du Canada

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s.21(1)(a)

s.21(1)(b)

Situational Report – Whale Issues – August 17, 2018

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

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s.21(1)(a)

s.21(1)(b)

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

[redacted]

- **Southern Resident Killer Whale (SRKW) Update**:

[redacted]

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s.21(1)(a)

s.21(1)(b)

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
  - On July 16, Ecojustice sent another letter to the Ministers and Deputy Ministers of DFO, ECCC and TC again calling for the establishment of an Emergency Order for the SRKW. They requested a meeting to further discuss the protection measures in place.

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s.21(1)(a)

s.21(1)(b)

- [redacted]
- [redacted]

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Dozie, Juachi

From: Brekke, Heather
Sent: August-16-18 2:19 PM
To: pac.prmc / pac.urpcm (DFO/MPO); McMillan, Christie
Cc: Fogliato, Cara
Subject: RE: Draft_Reply_2018-001-01016.docx
Attachments: MECTS-#3922292-v3-Draft_Reply_2018-001-01016_hb.docx

Hi Candace,

Please see attached. Note some of the links are broken.

Best
Heather

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: August-16-18 2:04 PM
To: Brekke, Heather; McMillan, Christie
Cc: Fogliato, Cara
Subject: Draft_Reply_2018-001-01016.docx

Hi Christie & Heather:
The attached draft will be used to respond to 300 general letters to the Minister. Example incomings attached.

I was looking for Karen's approval, but see she's out of the office with Heather acting. So I'm sending it to you both in case Heather wishes to defer to Christie (who is acting for Lisa, who has been our contact recently).

Our standard response re SRKW and Chinook got held up in Ottawa. It's come back to us to be sent out under Rebecca's signature.

We've had to update it, and need your approval of the SRKW info. Because of the many topics we have to cover, we have had to summarize significantly and rely on links to provide detail. Please review the entire response before considering any additions.

(Jeff Grout and Andrew Thomson have approved this draft).

Thanks
Candace.

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Ministerial Correspondence / Correspondance ministérielle Approval Form / Formulaire d'approbation

MCCU DOCKET # / N° DU DOSSIER UCCM : 2018-001-10146	MCCU CONTACT / RESPONSABLE À L'UCCM :
REPLY BY DEPARTMENT/ RÉPONSE DU MINISTÈRE	

DATE AND DEADLINES / DATE ET ÉCHÉANCE

DUE DATE TO MINO / ÉCHÉANCE AU CM : (mm-dd-yyyy / mm-jj-aaaa)	/2018	DATE RECEIVED IN MCCU / DATE DE RÉCEPTION À L'UCCM : (mm-dd-yyyy / mm-jj-aaaa)	/2018

COMMENTS / APPROACH – COMMENTAIRES / APPROCHE

Standard response re chinook management measures
August 14, 2018: Re-drafted to update

APPROVALS / APPROBATIONS

Level / Niveau	Name, Title and Sector / Nom, titre et secteur	Assigned Date / Date fixée	Date Due / Échéance	Date Approved / Date d'approbation	Changes / Modifications
Regional Director / Directeur(trice) régional(e)	Andrew Thomson Regional Director, Fisheries Management Branch			July 11, 2018 August 14, 2016	
Regional Director / Directeur(trice) régional(e)	Cheryl Webb Regional Director, Ecosystems Management Branch			July 1, 2018	
Regional Director / Directeur(trice) régional(e)	Mike Carlson Regional Director, Conservation & Protection			July 11, 2018	
	Approvals needed in Ottawa? No				
IF NECESSARY / SI NÉCESSAIRE					
Regional Director General / Directeur(trice) général régional(e)	Rebecca Reid, Regional Director General, Pacific Region			July 12, 2018	
ADM / RDG / DC / CO / AC SMA / DGR / SA / BC / CA					
Indigenous Affairs / Affaires autochtones Legal / Services juridiques IGA / Ai					
IF / SI PROVINCIAL / TERRITORIAL					
DM / SM					
PCO / BCP					

OTHER CONSULTATIONS / AUTRES CONSULTATIONS

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•	• Manager, Ministerial Correspondence, Pacific Region • Jeff Grout, Resource Manager, Salmon, • Jennifer Nener, Director, Salmon Management • Karen Leslie, A/Manager, Species at Risk Program • Lee Harber, Paul Cottrell, Marine Mammals • Mel Kotyk, Aboriginal Negotiations Division • Theona Russow, Pacific Litigation
OGD / AMG - (Name, Title, Branch, Date / Nom, titre, direction, date)	
•	

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b.c.c. / Cci – (Name, Department / Nom, ministère)	c.c. – (Name, email address / contact info / Nom, courriel, coordonnées)
•	•
ATTACHMENTS TO RESPONSE / PIÈCES JOINTES À LA RÉPONSE	
•	

Pages 2974 to / à 2975

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

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Khanna, Sukriti

From: Grout, Jeff
Sent: August-16-18 1:40 PM
To: Cottrell, Paul; MacConnachie, Sean
Cc: Harber, Lee; Nener, Jennifer; Jones, Lisa Ann; Dobko, Ashley
Subject: SRKW

Hi Sean and Paul,

Lots of interest in SRKW these days. I was wondering if there was any new science information on the health of SRKW individuals (apart from the ailing J50). Photogrammetry? I expect we'll be asked to input on the David Suzuki Foundation piece shortly. Thanks, Jeff

Jeff Grout
Regional Resource Manager – Salmon
Fisheries and Oceans Canada

Jeff.Grout@dfo-mpo.gc.ca

W: (604) 666-0497
C: [redacted]

Page 2977

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page 2678

s.16(2)

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Khanna, Sukriti

From: Harber, Lee
Sent: August-16-18 8:40 AM
To: Leslie, Karen; Brekke, Heather; Gallant, Nicole; MacConnachie, Sean; Eros, Carole; Moore, Kendra; Johansen, Jeff; Spence, Brenda; Cottrell, Paul; Nener, Jennifer; Cauffope, Genevieve; Galbraith, Ryan; Ho, Agatha; Hayes, Trish; Chmelnitsky, Elly; Malikian, Janine; Thar, Jonathan; Silverstein, Adam; Smith, Ken
Cc: Thomson, Andrew; Davis, Neil; Webb, Cheryl
Subject: Weekly SRKW OPS Committee

Agenda for today's meeting.

Standing items:

- J35 & J50 (Paul/Neil)
- RKW amended recovery strategy (Heather)
- SRKW Advisory Group (Lee)
- Communications (Janine)
- Roundtable

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

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Khanna, Sukriti

From: Davis, Neil
Sent: August-16-18 12:51 PM
To: Harber, Lee; Brekke, Heather; Webb, Cheryl
Subject: RE: SRKW -
Attachments:

Yes, I think it's fine to explain what we submit to them. Hopefully we'll confirm regional agreement on what we submit by end of day today. Lee, fyi, current versions of regional doc and NHQ doc are attached

---

From: Harber, Lee
Sent: Thursday, August 16, 2018 12:45 PM
To: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: Fw: SRKW -

NHQ RM is asking so chat about this. Shall I set up a call for tomorrow?

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>
Sent: Thursday, August 16, 2018 12:37 PM
To: Davis, Neil; Harber, Lee
Cc: Moore, Kendra
Subject: SRKW -

Colleagues,

I believe we are due to send comments to Nick's group tomorrow on his latest Options paper. Could we have a quick chat on the approaches we are planning to take with this? I am in your hands on timing: I am free for the rest of the day and can make myself available tomorrow based on your schedule.

Thanks

Paul

Paul Scott
Special Advisor
Fisheries Resource Management

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Khanna, Sukriti

From: Davis, Neil
Sent: August-16-18 12:40 PM
To: Henneman, Sonja; Webb, Cheryl
Subject: RE: Conference Speaker

Hi Sonja

How about today at 2:30? You can reach me at 504 666 0115. I'm also free at 4

Neil

From: Henneman, Sonja <sonja.henneman@tc.gc.ca>
Sent: Thursday, August 16, 2018 12:34 PM
To: Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: RE: Conference Speaker

Thank you Cheryl!

Hello Neil – would be happy to set up a call with you at your convenience. I am available tomorrow/Friday at 9:00am PST. I can give you a call at this time works for you.

Sonja

From: Webb, Cheryl [mailto:Cheryl.Webb@dfo-mpo.gc.ca]
Sent: Thursday, August 16, 2018 2:59 PM
To: Henneman, Sonja <sonja.henneman@tc.gc.ca>
Cc: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: RE: Conference Speaker

Sonja, I'm sorry for the slow response. I would recommend discussing this with Neil Davis, Director, Resource Management (copied here), as his group is generally responsible for whales, especially outreach.

Cheryl

From: Henneman, Sonja [mailto:sonja.henneman@tc.gc.ca]
Sent: Thursday, August 16, 2018 11:31 AM
To: Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Subject: FW: Conference Speaker

Hi Cheryl,

I understand that you were out of the office last week, and likely returning to a significant number of emails. I sent an email last Friday regarding an opportunity for a presentation to Boating BC's annual conference regarding what recreational boaters, and the recreational boating industry and manufacturers can do to support efforts to reduce physical and acoustic disturbance to SRKWs. My email below has context and additional information.

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If time permits, I would like to discuss this opportunity with you either later today or tomorrow morning PST time. I can then fill you in on our conversations to-date with Lisa.

Regards,

Sonja

From: Henneman, Sonja
Sent: Friday, August 10, 2018 5:44 PM
To: Cheryl.Webb@dfo-mpo.gc.ca
Subject: FW: Conference Speaker

Hi Cheryl,

Michelle Sanders suggested I contact you to start the ball rolling – albeit quickly – on upcoming opportunities to reach out to the recreational boating community. In particular, an opportunity has arisen to engage with recreational marine businesses in British Columbia for the purposes of education and outreach on reducing acoustic and physical disturbance to at-risk whales on the West Coast.

As background, I recently spoke with the Executive Director of BC Boating (Lisa Geddes), and she is enthusiastic about the idea of some sort of joint presentation (DFO and TC) at the Boating BC annual conference for the purposes of socializing the issue of underwater noise more broadly, but also as an opportunity to talk about the role of recreational boaters in reducing acoustic and physical disturbance, the MMR's etc. This opportunity came to light as Lisa had asked our group to do a presentation on Bill C-64 – see email trail below. The conference takes place in Richmond, BC from November 20-21, 2018. I have provided some background information below on both Boating BC Association and the Boating BC Conference, although you are likely familiar with this association.

In the immediate term, in order to confirm a spot on the agenda for a potential joint DFO/TC presentation, Lisa requires a content outline – something fairly high-level. I don't think that this requires a lot of work at this point, although I will need to jot down some points on Monday from our side. I had planned to provide a few bullets as an outline, but I have run out of time today so will have to wait until Monday. Can you please let me know if the idea of a joint presentation is of interest to DFO, and whether you would be able to get something to me by end of day Monday. I appreciate that this is a very quick turnaround, but I think it is a great opportunity to reach a broad audience that - according to Lisa - are very keen to hear what they can do and to learn more about the impacts of underwater noise.

We have spoken with Paul Cottrell in the past on such things, but thought it best to reach out to you given timing.
As this has come up very quickly, I apologize that there is not a lot of lead time.

Happy to discuss further, including by phone if this is helpful.

Sonja Henneman
Manager, Underwater Vessel-Noise Unit / Gestionnaire, Unité du bruit sous-marin des bâtiment
Transport Canada / Transports Canada
Government of Canada / Gouvernement du Canada
sonja.henneman@tc.gc.ca / Tel: 613-991-6514 / TTY: 1-888-675-6863

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Place de Ville, Tower C - 26th Floor| Tour C - 26e étage
330 rue Sparks Street, Ottawa ON K1A 0N5
Transport Canada Transports Canada

Boating BC Association (website)

- Network of recreational boaters and marine businesses with over 300 members ranging from small owner/operated businesses to large, multinational corporations
- Has three industry sector groups: BC Yacht Brokers Association, Association of Bareboat Charters & Sailing Schools, and the BC Marina Sector Group
- Represents and advocates on behalf of the boating industry to all levels of government
- Promotes safe, responsible boating

Boating BC Conference (website)

- Annual, two-day conference targeted to recreational marine businesses in all sectors across BC; open to Boating BC members and the public
- Conference covers latest industry news and trends; meant to provide tangible takeaways for boaters
- Previous conference presentations have included topics on: aquatic invasive species, safety certification programs, innovation in the boating industry, economics of the Canadian marine industry, and future trends

From: Lisa Geddes [mailto:
Sent: Thursday, August 09, 2018 4:22 PM
To: Johnson, Jeffrey <jeffrey.johnson@tc.gc.ca>
Cc: Henneman, Sonja <sonja.henneman@tc.gc.ca>
Subject: RE: Conference Speaker

Thank you Jeff.

Once you have approval, I would like to discuss who else you are recommending we invite before the invitation is extended. We have a pretty tight format at the event and our presentations are structured in a way that keeps things moving along and engaging for our delegates. I don't see an issue inviting regional colleagues, but want to be really clear on the format, speaking times and content – and will have to run it by our committee for final approval.

Sonia – as a next step you had mentioned a content outline for consideration. That will also have to go in front of our committee before we can confirm a second presentation.

I am away from August 20 to September 5 and am working to have all of speakers confirmed prior to departure so please keep me posted as things progress on you end.

Really appreciate your support of our event!

Best,
Lisa

Lisa Geddes
Executive Director
Boating BC Association
c.
boatingbc.ca | **facebook** | **twitter**

s.16(2)

s.19(1)

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From: Johnson, Jeffrey <jeffrey.johnson@tc.gc.ca>
Sent: August 9, 2018 8:09 AM
To: Lisa Geddes <[redacted]
Cc: Henneman, Sonja <sonja.henneman@tc.gc.ca>
Subject: RE: Conference Speaker

Hi Lisa – we are working on a costing proposal at our end to confirm attendance for two subject matters – one on Bill C-64/education and outreach and the other on underwater noise from vessels and impacts on marine mammals (you spoke to Sonja on that one).

I'm doing my best to get confirmation by tomorrow. If we have clearance on our end, we will also be suggesting that our regional colleagues from the Department of Fisheries and Oceans and the Canadian Coast Guard also join us.

Jeff

Jeff Johnson

Manager, Environmental Policy
Transport Canada / Government of Canada
Jeffrey.johnson@tc.gc.ca / Tel: 613-998-6474 / Cel: [redacted] / TTY: 1-888-675-6863

Gestionnaire, Politique environnement
Transports Canada / Gouvernement du Canada
Jeffrey.johnson@tc.gc.ca / Tél.: 613-998-6474 / Cel. [redacted] / TTY.: 1-888-675-6863

From: Lisa Geddes [mailto:[redacted]
Sent: Thursday, August 09, 2018 10:57 AM
To: Johnson, Jeffrey <jeffrey.johnson@tc.gc.ca>
Subject: Conference Speaker

Hi Jeff,

We are launching registration for our conference next week and we include a list of speakers for the event. Are you able to share the name of the person who will be speaking on your behalf? I will also have to draft a write-up of the presentation (I'll draft something and send it over later today) and include a head shot.

I would appreciate it if you could get back to me today or tomorrow.

Thanks so much,
Lisa

BOATINGBC
ASSOCIATION
Lisa Geddes
Executive Director
Boating BC Association
c [redacted]
boatingbc.ca | **facebook** | **twitter**

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Mbarushimana, Jenny

From: Gilchrist, Brett
Sent: August-16-18 12:07 PM
To: Patrick, Lindsey; Burns, Adam; Winfield, Nicholas; Stewart, Julie; Thomson, Andrew; Whorley, David; Davis, Neil; Harber, Lee
Cc: Scott, Paul G; Moore, Kendra
Subject: MECTS-#3953269-v1-MECTS-#3953240-v1-Current_Issues_Deck_-August_2018-SRKW_(3).ppt
Attachments: MECTS-#3953269-v1-MECTS-#3953240-v1-Current_Issues_Deck_-August_2018-SRKW_(3).ppt

Importance: High

Thanks folks, we have been asked to send it now.

There will be another chance to tweak from what I understand.

brett

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Protection and Recovery of Southern Resident Killer Whale (SRKW)

August 24, 2018

DRAFT

Canada

Pages 2986 to / à 2989
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21(1)(b), 21(1)(a)

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Page 2990

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69(1)(g) re: (e), 21(1)(b), 21(1)(a), 69(1)(g) re: (a)

of the Access to Information Act

de la Loi sur l'accès à l'information

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21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

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Dozie, Juachi

From: Harber, Lee
Sent: August-16-18 3:40 PM
To: Thomson, Andrew
Cc: Davis, Neil
Subject: RE: Situation Report for DM August 17
Attachments: MECTS-#3952364-v1-Situation_Report_for_DM_17Aug2018.docx

Hi Andy,

Please find updates in track changes.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Thomson, Andrew
Sent: 2018–August-16 9:09 AM
To: Harber, Lee
Subject: FW: Situation Report for DM August 17

Lee

Can you update as required.

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

---

From: Van Bemmel, Alexis
Sent: Thursday, August 16, 2018 8:21 AM
To: Goetze, Darren <Darren.Goetze@dfo-mpo.gc.ca>; Perry, Jacqueline <Jacqueline.Perry@dfo-mpo.gc.ca>; Lambert, Robert <Robert.Lambert@dfo-mpo.gc.ca>; Valkenier, Mary-Ellen <Mary-Ellen.Valkenier@dfo-mpo.gc.ca>; Doucet, Serge <Serge.Doucet@dfo-mpo.gc.ca>; Vincent, Patrick <Patrick.Vincent@dfo-mpo.gc.ca>; Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>; McPherson, Arran <Arran.McPherson@dfo-mpo.gc.ca>; Laverdure, Louise <Louise.Laverdure@dfo-mpo.gc.ca>; Morel, Philippe <Philippe.Morel@dfo-mpo.gc.ca>; Pelletier, Mario <Mario.Pelletier@dfo-mpo.gc.ca>; Lick, Gregory <Gregory.Lick@dfo-mpo.gc.ca>; Hubley, Marian <Marian.Hubley@dfo-mpo.gc.ca>; 'mike.beale@canada.ca' <mike.beale@canada.ca>; marc.diorio@canada.ca; Goodier, Gwen (EC) <gwen.goodier@canada.ca>; Spicer, Mary-Ann (EC) <mary-ann.spicer@canada.ca>; Marshall, Christopher (EC) <christopher.marshall@canada.ca>; 'natasha.rascanin@tc.gc.ca' <natasha.rascanin@tc.gc.ca>; Weldon, Jane <jane.weldon@tc.gc.ca>; Jackson, Ashley <Ashley.Jackson@dfo-mpo.gc.ca>; Sanders , Michelle <michelle.sanders@tc.gc.ca>; Landry, Jean <Jean.Landry@dfo-mpo.gc.ca>; TC.MSSWhales <TC.MSSWhales-BaleinesSSM.TC@tc.gc.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>; Dwyer, Judy <Judy.Dwyer@dfo-mpo.gc.ca>; Hill, Jonathan <Jonathan.Hill@dfo-mpo.gc.ca>; Sicard, Marc <Marc.Sicard@dfo-mpo.gc.ca>; MacDonald, Jeff (NCR)

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<Jeffery.MacDonald@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; Brisebois, Luc <luc.brisebois@tc.gc.ca>; Blanchard, Tony <Tony.Blanchard@dfo-mpo.gc.ca>; Bouchard, Nicole <Nicole.Bouchard@dfo-mpo.gc.ca>; Werszko, Elizabeth <elizabeth.werszko@tc.gc.ca>; Bliss, Doug <Doug.Bliss@dfo-mpo.gc.ca>; Slaney, LLoyd <Lloyd.Slaney@dfo-mpo.gc.ca>; LeBlanc, Denise <Denise.LeBlanc@dfo-mpo.gc.ca>; Finn, Ray <Ray.Finn@dfo-mpo.gc.ca>; Pike, Kelly J <Kelly.Pike@dfo-mpo.gc.ca>; Cahill, Paul <Paul.Cahill@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Smith, Darlene <Darlene.Smith@dfo-mpo.gc.ca>; Bettencourt, Tracy <Tracy.Bettencourt@dfo-mpo.gc.ca>; Goulet, Yves <Yves.Goulet@dfo-mpo.gc.ca>
Cc: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Subject: RE: Situation Report for DM August 17

Hi everyone,

Please find attached a draft sit rep for the DM. Again, this one is pretty light, so input on your respective issues will be very much appreciated! Please provide to me by 10am EST tomorrow.

Many thanks,
Alexis

Alexis Van Bemmel
Fisheries and Aquaculture Management Officer |
Agent, Gestion des pêches et de l'aquaculture
Fisheries and Oceans | Pêches et océans
200 rue Kent Street - 13S002A Ottawa, ON, K1A 0E6
Alexis.VanBemmel@dfo-mpo.gc.ca
Telephone | Téléphone (613) 402-7832
Facsimile | Télécopieur (613) 990-7051
Government of Canada | Gouvernement du Canada

Pages 3001 to / à 3004

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pages 2967 to / à 2970

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s.16(2)

Dozie, Juachi

From: Harber, Lee
Sent: August-16-18 12:10 PM
To: Gilchrist, Brett; Moore, Kendra; Scott, Paul G; Thorleifson, Erika
Cc: Davis, Neil
Subject: RE: SRKW Deck
Attachments: MECTS-#3953240-v1-Current_Issues_Deck_-August_2018-SRKW_hb.ppt

No worries, understand completely. Please see attached for next round / draft.

Cheers
Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Gilchrist, Brett
Sent: 2018–August-16 12:09 PM
To: Harber, Lee; Moore, Kendra; Scott, Paul G; Thorleifson, Erika
Subject: RE: SRKW Deck

Sorry Lee, ADMO just stopped in an said they need what I have now. We confirmed we will be able to tweak. I copied you, Neil and Andy on this. When you get your tweaks, send them to us and we will update a version we can have ready for the next round.

Erika, made most of your changes as quick as possible.

Brett

From: Harber, Lee
Sent: August-16-18 2:54 PM
To: Gilchrist, Brett; Moore, Kendra; Scott, Paul G; Thorleifson, Erika
Subject: RE: SRKW Deck

Gotcha, we will press send at 12

From: Gilchrist, Brett
Sent: 2018–August-16 11:48 AM
To: Harber, Lee; Moore, Kendra; Scott, Paul G; Thorleifson, Erika
Subject: RE: SRKW Deck

Thanks Lee. Please get us what you haver ASAP. We will be able to tweak later as we have to have to ADMs in 15 minutes.

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From: Harber, Lee
Sent: August-16-18 2:47 PM
To: Gilchrist, Brett; Moore, Kendra; Scott, Paul G; Thorleifson, Erika
Subject: RE: SRKW Deck

Hi guys,

We are making a few tweaks and adding precision on a few points. We will try for noon but would be good to have a few extra minutes so that my Director Neil Davis can review.

Thanks
Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Gilchrist, Brett
Sent: 2018–August-16 11:26 AM
To: Moore, Kendra; Harber, Lee; Scott, Paul G; Thorleifson, Erika
Subject: RE: SRKW Deck

Thanks Kendra. Reviewing now and if Erika and Lee can confirm no issues with details, I have some tweaks we can make.

Erika, Paul, Lee, once you are ok with the details, we will circulate to Andy T. , Julie and Nick, Adam and Randy, and our ADMO copying you guys. This is the direction we have from our ADMO.

Thanks

From: Moore, Kendra
Sent: August-16-18 2:19 PM
To: Harber, Lee; Gilchrist, Brett; Scott, Paul G; Thorleifson, Erika
Subject: SRKW Deck

Hi all,

Attached is the deck for your review. Please provide comments asap.

Thanks,

Kendra Moore

Senior Fisheries and Aquaculture Management Officer |
Agente Principale, Gestion des pêches et de l'aquaculture
Integrated Resource Management | Gestion intégrée des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
Kendra.moore@dfo-mpo.gc.ca
Tel: ***New*** 613-290-2344

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Current SRKW Issues

August 16, 2018

Canada

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69(1)(g) re: (e), 21(1)(b), 21(1)(a), 69(1)(g) re: (a)

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Davis, Neil

From: Davis, Neil
Sent: Thursday, August 16, 2018 12:43 PM
To: Nener, Jennifer (Jennifer.Nener@dfo-mpo.gc.ca); Thomson, Andrew; Webb, Cheryl
Cc: Brekke, Heather
Subject: FW: SRKW
Attachments:

Hi all

A reminder that we are trying to incorporate any feedback you may have on this by today so it can be sent to NHQ tomorrow. Apologies for the tight timelines

Thx
Neil

From: Davis, Neil
Sent: Tuesday, August 14, 2018 11:18 AM
To: Nener, Jennifer (Jennifer.Nener@dfo-mpo.gc.ca) <Jennifer.Nener@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>
Subject: FW: SRKW

All,

Neil

From: Thorleifson, Erika
Sent: Friday, August 10, 2018 12:32 PM
To: Winfield, Nicholas <Nicholas.Winfield@dfo-mpo.gc.ca>; Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>;

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Laverdure, Louise <Louise.Laverdure@dfo-mpo.gc.ca>; Goetze, Darren <Darren.Goetze@dfo-mpo.gc.ca>; Beaton, Heather (DOJ) <Heather.Beaton@justice.gc.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; Legault, Josee (DOJ) <Josee.Legault@justice.gc.ca>; Sicard, Marc <Marc.Sicard@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: Dwyer, Judy <Judy.Dwyer@dfo-mpo.gc.ca>; Verville, Josée Annie <Josee-Annie.Verville@dfo-mpo.gc.ca>; Nadeau, Simon <Simon.Nadeau@dfo-mpo.gc.ca>; Orok, Rowena <Rowena.Orok@dfo-mpo.gc.ca>; Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>
Subject: RE: SRKW [redacted]

Hi all,

Further to our discussion this morning, could you please send any comments that you have on [redacted] document to me by Friday, August 17.

Thanks,
Erika

-----Original Appointment-----
From: Dieudonné, Rilene **On Behalf Of** Winfield, Nicholas
Sent: August-09-18 3:42 PM
To: Burns, Adam; Laverdure, Louise; Goetze, Darren; Beaton, Heather (DOJ); Busby, Corina; Thorleifson, Erika; Legault, Josee (DOJ); Sicard, Marc; Scott, Paul G; Jenkins, Randy; Stewart, Julie; Webb, Cheryl; Davis, Neil; Thomson, Andrew
Cc: Dwyer, Judy; Verville, Josée Annie; Nadeau, Simon; Orok, Rowena; Gilchrist, Brett
Subject: SRKW [redacted]
When: August-10-18 11:00 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: 10W84 (Nick's Office) or 1-877-413-4788 ID#5581586

[redacted]

Pages 3023 to / à 3026
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pages 2869 to / à 2872

s.69(1)(g) re: (a)
s.69(1)(g) re: (e)
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Davis, Neil

From: Nener, Jennifer
Sent: Thursday, August 16, 2018 11:09 PM
To: Davis, Neil; Thomson, Andrew; Webb, Cheryl
Cc: Brekke, Heather
Subject: RE: SRKW
Attachments:

Neil – a few suggestions in track changes. Thanks so much.

Jennifer

From: Davis, Neil
Sent: Thursday, August 16, 2018 12:43 PM
To: Nener, Jennifer <Jennifer.Nener@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>
Subject: FW: SRKW

Hi all

A reminder that we are trying to incorporate any feedback you may have on this by today so it can be sent to NHQ tomorrow. Apologies for the tight timelines

Thx
Neil

From: Davis, Neil
Sent: Tuesday, August 14, 2018 11:18 AM
To: Nener, Jennifer (Jennifer.Nener@dfo-mpo.gc.ca) <Jennifer.Nener@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>
Subject: FW: SRKW

All,

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

[redacted]

Neil

From: Thorleifson, Erika
Sent: Friday, August 10, 2018 12:32 PM
To: Winfield, Nicholas <Nicholas.Winfield@dfo-mpo.gc.ca>; Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Laverdure, Louise <Louise.Laverdure@dfo-mpo.gc.ca>; Goetze, Darren <Darren.Goetze@dfo-mpo.gc.ca>; Beaton, Heather (DOJ) <Heather.Beaton@justice.gc.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; Legault, Josee (DOJ) <Josee.Legault@justice.gc.ca>; Sicard, Marc <Marc.Sicard@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: Dwyer, Judy <Judy.Dwyer@dfo-mpo.gc.ca>; Verville, Josée Annie <Josee-Annie.Verville@dfo-mpo.gc.ca>; Nadeau, Simon <Simon.Nadeau@dfo-mpo.gc.ca>; Orok, Rowena <Rowena.Orok@dfo-mpo.gc.ca>; Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>
Subject: RE: SRKW [redacted]

Hi all,

Further to our discussion this morning, could you please send any comments that you have on t[redacted] document to me by Friday, August 17.

Thanks,
Erika

-----Original Appointment-----
From: Dieudonné, Rilene **On Behalf Of** Winfield, Nicholas
Sent: August-09-18 3:42 PM
To: Burns, Adam; Laverdure, Louise; Goetze, Darren; Beaton, Heather (DOJ); Busby, Corina; Thorleifson, Erika; Legault, Josee (DOJ); Sicard, Marc; Scott, Paul G; Jenkins, Randy; Stewart, Julie; Webb, Cheryl; Davis, Neil; Thomson, Andrew
Cc: Dwyer, Judy; Verville, Josée Annie; Nadeau, Simon; Orok, Rowena; Gilchrist, Brett
Subject: SRKW [redacted]
When: August-10-18 11:00 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: 10W84 (Nick's Office) or 1-877-413-4788 ID#5581586

[redacted]

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[redacted]

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Pages 3030 to / à 3032

are withheld pursuant to sections

sont retenues en vertu des articles

69(1)(g) re: (e), 69(1)(g) re: (a)

of the Access to Information Act

de la Loi sur l'accès à l'information

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Davis, Neil

From: Davis, Neil
Sent: Thursday, August 16, 2018 1:17 PM
To: Nener, Jennifer
Subject: RE: SRKW [redacted]

Activities likely to destroy critical habitat

From: Nener, Jennifer
Sent: Thursday, August 16, 2018 1:11 PM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: RE: SRKW [redacted]

Thx. What does ALTD CH mean?

From: Davis, Neil
Sent: Thursday, August 16, 2018 1:10 PM
To: Nener, Jennifer <Jennifer.Nener@dfo-mpo.gc.ca>
Subject: RE: SRKW [redacted]

Yes, you're correct. Sorry, forgot to include password!

From: Nener, Jennifer
Sent: Thursday, August 16, 2018 1:04 PM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: RE: SRKW [redacted]

Thanks Neil – am assuming V 5 is for comparison – it seems to be password-protected?

JN

From: Davis, Neil
Sent: Thursday, August 16, 2018 12:43 PM
To: Nener, Jennifer <Jennifer.Nener@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>
Subject: FW: SRKW [redacted]

Hi all

A reminder that we are trying to incorporate any feedback you may have on this by today so it can be sent to NHQ tomorrow. Apologies for the tight timelines

Thx
Neil

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From: Davis, Neil
Sent: Tuesday, August 14, 2018 11:18 AM
To: Nener, Jennifer (Jennifer.Nener@dfo-mpo.gc.ca) <Jennifer.Nener@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>
Subject: FW: SRKW

All,

Neil

From: Thorleifson, Erika
Sent: Friday, August 10, 2018 12:32 PM
To: Winfield, Nicholas <Nicholas.Winfield@dfo-mpo.gc.ca>; Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Laverdure, Louise <Louise.Laverdure@dfo-mpo.gc.ca>; Goetze, Darren <Darren.Goetze@dfo-mpo.gc.ca>; Beaton, Heather (DOJ) <Heather.Beaton@justice.gc.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; Legault, Josee (DOJ) <Josee.Legault@justice.gc.ca>; Sicard, Marc <Marc.Sicard@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: Dwyer, Judy <Judy.Dwyer@dfo-mpo.gc.ca>; Verville, Josée Annie <Josee-Annie.Verville@dfo-mpo.gc.ca>; Nadeau, Simon <Simon.Nadeau@dfo-mpo.gc.ca>; Orok, Rowena <Rowena.Orok@dfo-mpo.gc.ca>; Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>
Subject: RE: SRKW

Hi all,

Further to our discussion this morning, could you please send any comments that you have on document to me by Friday, August 17.

Thanks,
Erika

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

-----Original Appointment-----
From: Dieudonné, Rilene **On Behalf Of** Winfield, Nicholas
Sent: August-09-18 3:42 PM
To: Burns, Adam; Laverdure, Louise; Goetze, Darren; Beaton, Heather (DOJ); Busby, Corina; Thorleifson, Erika; Legault, Josee (DOJ); Sicard, Marc; Scott, Paul G; Jenkins, Randy; Stewart, Julie; Webb, Cheryl; Davis, Neil; Thomson, Andrew
Cc: Dwyer, Judy; Verville, Josée Annie; Nadeau, Simon; Orok, Rowena; Gilchrist, Brett
Subject: SRKW
When: August-10-18 11:00 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: 10W84 (Nick's Office) or 1-877-413-4788 ID#5581586

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s.16(2)
s.69(1)(g) re: (a)
s.69(1)(g) re: (e)

Davis, Neil

From: Davis, Neil
Sent: Thursday, August 16, 2018 1:09 PM
To: Nener, Jennifer (Jennifer.Nener@dfo-mpo.gc.ca); Thomson, Andrew; Webb, Cheryl
Cc: Brekke, Heather
Subject: RE: SRKW [redacted]

[redacted]

From: Davis, Neil
Sent: Thursday, August 16, 2018 12:43 PM
To: Nener, Jennifer (Jennifer.Nener@dfo-mpo.gc.ca) <Jennifer.Nener@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>
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Cc: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Leslie, Karen <Karen.Leslie@dfo-mpo.gc.ca>
Subject: FW: SRKW [redacted]

All,

[redacted]

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Neil

From: Thorleifson, Erika
Sent: Friday, August 10, 2018 12:32 PM
To: Winfield, Nicholas <Nicholas.Winfield@dfo-mpo.gc.ca>; Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Laverdure, Louise <Louise.Laverdure@dfo-mpo.gc.ca>; Goetze, Darren <Darren.Goetze@dfo-mpo.gc.ca>; Beaton, Heather (DOJ) <Heather.Beaton@justice.gc.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; Legault, Josee (DOJ) <Josee.Legault@justice.gc.ca>; Sicard, Marc <Marc.Sicard@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: Dwyer, Judy <Judy.Dwyer@dfo-mpo.gc.ca>; Verville, Josée Annie <Josee-Annie.Verville@dfo-mpo.gc.ca>; Nadeau, Simon <Simon.Nadeau@dfo-mpo.gc.ca>; Orok, Rowena <Rowena.Orok@dfo-mpo.gc.ca>; Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>
Subject: RE: SRKW [redacted]

Hi all,

Further to our discussion this morning, could you please send any comments that you have on [redacted] document to me by Friday, August 17.

Thanks,
Erika

-----Original Appointment-----
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Sent: August-09-18 3:42 PM
To: Burns, Adam; Laverdure, Louise; Goetze, Darren; Beaton, Heather (DOJ); Busby, Corina; Thorleifson, Erika; Legault, Josee (DOJ); Sicard, Marc; Scott, Paul G; Jenkins, Randy; Stewart, Julie; Webb, Cheryl; Davis, Neil; Thomson, Andrew
Cc: Dwyer, Judy; Verville, Josée Annie; Nadeau, Simon; Orok, Rowena; Gilchrist, Brett
Subject: SRKW [redacted]
When: August-10-18 11:00 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: 10W84 (Nick's Office) or 1-877-413-4788 ID#5581586

[redacted]

s.16(2)(b)

s.19(1)

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Dozie, Juachi

From: Harber, Lee
Sent: August-16-18 9:23 AM
To: Davis, Neil
Subject: FW: Summary report: IMSAG - July 30
Attachments: Summary Report IMSAG - July 30- cw.docx

Hi Neil,

Some feedback from ECCC on the forward agenda structure format. This seems reasonable but I would like to get your thoughts and if you think this makes sense. I am meeting with the secretariat group again next Tuesday to get final input before circulating to participants. Also, attached is the draft meeting report / summary.

Thanks
Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Wong, Cecilia (EC) [mailto:cecilia.wong@canada.ca]
Sent: 2018–August-15 8:38 PM
To: Harber, Lee
Cc: Marshall, Christopher (EC); Spicer, Mary-Ann (EC); Muise, Anna-Marie (EC); Graham, Gwyn (EC); Pelton, Jeff; Henneman, Sonja (Sonja.Henneman@tc.gc.ca); Jones, Lisa Ann; Lafrance, Christian (christian.lafrance@tc.gc.ca); Leslie, Karen; Davis, Neil; Sanders , Michelle (michelle.sanders@tc.gc.ca); Webb, Cheryl
Subject: RE: Summary report: IMSAG - July 30

Hi Lee,
Thanks the opportunity to review the draft summary report from the July 30 IMSAG meeting. Attached, I've provided comments to the report in tracking changes mode. Maybe we could might come up with a better acronym for the group [redacted]

Thanks also for drafting the deck on the proposed structure for future meetings and forward agenda topics. I might suggest a simpler template that reflects the objectives of the advisory group to:

1. Provide a forum for members to discuss actions underway and planned, and to provide insights from different perspectives
2. Identify opportunities for collaboration and partnership to advance recovery measures
3. To improve shared understanding of the complexities of SRKW recovery and shared responsibilities and authorities to reduce threats to SRKW recovery

Each of these items could be a component of the agenda template:

1. Standing item: Roundtable update on actions underway/planned
2. Standing item: Discussion on collaborative opportunities
3. Changing item: Topic by expert or member to improve understanding on complexities/responsibilities/authorities. The following were items that were raised during the July 30 meeting.
    - Role of hatcheries to increase prey availability

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- Prey competition to pinnipeds
- Impacts/benefits of netpens
- Hydrophone network and data
- Fed-Prov or Can-US collaboration on key contaminants of concern
- Outfalls/discharges into critical habitat
- Wastewater management in the lower Fraser

Hope this helps. I'm happy to discuss. Cec

From: Harber, Lee [mailto:Lee.Harber@dfo-mpo.gc.ca]
Sent: August 9, 2018 2:04 PM
To: Marshall, Christopher (EC); Pelton, Jeff (jeff.pelton@tc.gc.ca); Henneman, Sonja (Sonja.Henneman@tc.gc.ca); Jones, Lisa Ann; Wong, Cecilia (EC); Lafrance, Christian (christian.lafrance@tc.gc.ca); Leslie, Karen
Cc: Davis, Neil; Sanders , Michelle (michelle.sanders@tc.gc.ca); Webb, Cheryl
Subject: Summary report: IMSAG - July 30

Hi all,

For your review, please find attached draft summary report from the July 30 IMSAG meeting. I've been pulling this together based on everyone's notes but would appreciate a thorough review to ensure I have capture the essential points.

I've also attached the revised forward agenda deck that that outlies a proposed structure for future meetings.

Lastly, I am in discussions with DFO communications on establishing an online repository for IMSAG agenda's, reports, presentations, etc.

Please provide feedback by COB next Thursday. We can check-in and discuss on Tuesday call as well.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: (613) 797-5146

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Opening Remarks

Jonathan Wilkinson, Minister, Fisheries and Oceans Canada

- This government is committed to protection of SRKW and has made significant commitments towards activities that will address the key threats: prey availability, physical and acoustic disturbance, and contaminants.
- The federal government will be looking to this group to help inform priorities going forward and to ensure that measures in place are right ones.
- Multi-stakeholder forums are a good way for everyone to be informed and to work together on these critical issues impacting the recovery of SRKW through dialogue, meaningful discussion, good faith, and an open mind.
- Welcome that people are coming to the table to have these conversations

Catherine Blewett, Deputy Minister, Fisheries and Oceans Canada

- There was a delayed start following the SRKW Symposium, however departments are all working together to deliver on measures to address the key threats.
- Federal Departments are looking to this group for open feedback on how to best move forward on recovery measures and work towards a shared understanding of the issues.
- It means a lot to have broad representation at this forum to help advise on this issue.

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Update Presentations

1. Amended Marine Mammal Regulations

Presenter: Andy Thomson, Regional Director, Fisheries Management, DFO

- Please see PowerPoint presentation for detailed update information.

Comments from Participants:

- Support for provisions under MMR that provides exemption for vessels in transit.
- Question on whether ~~or not~~ there has been any enforcement of regulations to date and when ~~the official~~ the regulations officially came into force.
- Concern about what regulations will be mean for aboriginal fishing activities e.g. if SRKW swims into fishing gear or vessels that are meant for food gathering purposes.

Information from Federal Officials:

- The regulations came into force on June 22, 2018.
- DFO is implementing a phased approach that will begin with education & compliance promotion (e.g. technical briefings, online information, etc.) that will eventually ramp up to enforcement. The intent is that over time, DFO will deliver a 30% increase in patrols over foraging areas and critical habitat for SRKW.
- The regulations will not have any impact on Aboriginal fishing right and/or activities. In regards to the vessel approach distance, this would only ~~be enforced~~apply if you are moving towards whales, not if the whales are moving towards a vessel. However, DFO is still in the process of designing enforcement protocols that are reasonable for vessel operators.

2. Proposed new critical habitat (amended RKW Recovery Strategy)

Presenter: Cheryl Webb, Regional Director, Ecosystem Management, DFO

- Please see PowerPoint presentation for detailed update information.

Comments from Participants:

- The representative from the recreational~~/sport~~ ~~fishery~~ fishing sector expressed ~~some~~ concern ~~and confusion around the distinction between the~~about recent fishery closures ~~and the new proposed critical habitat,~~ which ~~has~~ have led to a lack of trust. ~~Further, t~~They feel ~~this is a~~the process for expanding critical habitat ~~that~~ should not be rushed and ~~it is important that it is done in a way that makes sense~~encouraged the inclusion of more traditional and local knowledge, and updated scientific information.
- There is a regulatory timeframe for designating critical habitat. Current science using hydrophones and local observations agree that SRKW are in the proposed critical habitat areas 12 months of the year and that these areas are highly productive. A precautionary approach is

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needed to define critical habitat as SRKW are dynamic mobile species as are their prey, and the population requires immediate attention toward imminent threats.

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- Some participants requested additional information on how the 2 new areas have been chosen versus others.
- DFO representatives informed the group that comments and concerns are being closely reviewed through the Species at Risk consultation process.
- Question on how my comments have been received from Indigenous groups through consultation to date.
- ~~Some participants felt that additional critical habitat needs to be established, and quickly as there is adequate scientific based evidence to support its identification and this would support a precautionary approach.~~

Information from Federal Officials:

- DFO is respecting ~~moving forward on approving the additional critical habitat within time defined by~~ statutory requirements to amend the RKW Recovery Strategy with proposed new critical habitat. Comments and concerns are being closely reviewed through the Species at Risk consultation process and this is balanced with the need to respond to imminent threats to SRKW recovery.~~;~~

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- ~~however it will be important to have proper consultation and engagement.~~
- DFO will continue to move forward as efficiently as possible while applying the precautionary approach and adaptive management.

3. ECHO: Vessel Slowdown / Lateral Displacement trials

Presenter: Krista Trounce, Vancouver Fraser Port Authority

- Please see PowerPoint presentation for detailed update information.

Comments from Participants:

- Strong support for the second year of vessel slowdown trials~~is initiative~~ and recognition ~~of the strong value~~that ~~in a~~ voluntary measures can yield high participation rates in more immediate timeframes than regulatory measures.

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- This year the slowdown trials were approached in different ways in order to increase participation rate. The objective was for similar sound reduction with higher participation rate. Slowdown was implemented only when whales were present. Overall participation rate was 80% during week 1 as reported by pilots and already 84% partway through week 2.
- Companies interested in knowing results, shipping industry is engaged.

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- Chamber of Shipping is pleased with participation, noting that ~~–~~some companies who did not sign on became aware and participated anyway, and that~~; noted~~ additional transit time due to slower vessel speeds was more of a concern for outbound vessels~~; glad to see industry stepping out~~.

- ~~This year the slowdown has been approached in different ways in order to increase participation rate. The objective was for similar sound reduction with higher participation rate. Slowdown was implemented only when whales were present. Overall participation rate of 80% week 1 as reported by pilots; week 2 at 84% already but not complete yet.~~

Information from Federal Officials:

Presenter: Yvette Myers, Executive Director, OPP Implementation, Transport Canada

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- Transport Canada is working with the Canadian Coast Guard and US Coast Guard on a lateral displacement trial in the boundary waters of the Juan de Fuca Strait. Currently, there is an established traffic regulation scheme defined through a Canada-US agreement on traffic cooperation. Under the lateral displacement trial, vessels will be requested to shift as far south as possible to reduce noise in foraging areas within the Juan de Fuca Strait. DFO hydrophones have been placed in foraging areas to measure the resulting reduction in vessel noise.

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- ~~Established traffic regulation scheme – Canada is signatory to a US agreement on traffic cooperation i.e. outbound traffic lane, lateral displacement, CCG manages this area – working with USAG, developing operational procedures, vessel traffic officers, reporting protocols. Communication products, this portion did not include BC Coast pilots~~

- ~~Voluntary measures have been effective~~

- ~~Transport Canada in collaboration with ECHO is aiming to begin lateral displacement of shipping lanes on August 20. This will established a traffic separation scheme in Juan de Fuca through Canada US agreement; US Coast Guard manages Canadian portions of Juan de Fuca.~~

- Transport Canada is working with the USCG on passing requirements and operational procedures, vessel traffic officers and~~,~~ reporting protocols~~-~~. Information will be shared through postcards translated in multiple languages and distributed through coast pilots upon vessel entry into Salish Sea waters ~~. and have come up with what information updates that are is available or ways of communication in multiple languages~~

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- ~~Information sharing through postcards distributed by Puget Sound and BC coast pilots.~~

4. Update on Science Activities

Presenter: Carmel Lowe, Regional Director, Science Branch, DFO

- Please see PowerPoint presentation for detailed update information.

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Comments from Participants:

- Question from the Pacific Whale Watching Association regarding a study conducted by the United States National Oceanic and Atmospheric Association on digital tags used to track killer whales (Brad Hanson). There is interest ~~in general~~ about how Canada is collaborating with the US on activities to address key threats e.g. contaminants. Also, interest in whether NOAA shares data with Canadian counterparts and if there is agreement on science between government and industry in the US.

- Significant interest from participants in obtaining results of acoustic data that is being collected by DFO Sciences' hydrophones network. Participants are interested in having DFO share acoustic data with operators so that they are aware of how much noise they are making and how they can adjust.

- Any science monitoring of noise in closure areas? Would be very good know impact of vessel noise in closure areas.

- Concern that not enough effort is being made on prey availability and on salmon in freshwater ecosystems. Example of the Sooke net pen project and how whale watchers are supporting recovery efforts but ~~the~~ DFO is not contributing to these efforts.

Information from Federal Officials:

- US~~/~~ and CAN ~~collaboration~~ collaborate on work relating to all key threats ~~work – ensure we are~~to leverage~~ing~~ each other's efforts. Annual meeting between science organizations for collaboration.

- Under the MMR, there are ~~–~~ no requirements to keep vessel engines on or turn ~~it~~ them off as vessel maintain the minimum approach distance ~~.~~

- The purpose of current research is to evaluate the effectiveness of management actions to mitigate threats and find answers to questions that stakeholders are asking. Eg. What are factors that affect noise the most for SRKW recovery: periods of complete quiescence as provided through acoustic reserves (Robson Bight Biggs Reserve), lower noise levels for longer periods, or higher volume but for shorter periods?

- Hydrophones are strategically located in critical habitat to measure noise while digital tags are used to characterize 24 hour foraging behaviour in RKW; the overall health of RKW are measured through sampling saliva, blow, feces, urine and blubber; and Focal Follow studies are recording behaviour (feeding, foraging, resting, traveling, socializing) of individual whales every 5 minutes as they are being followed an hour at a time.

  ~~Focal follow – hydrophone data is collected every 3 months, will compare this data with we have observed in the fall.~~

  Future agenda will include a focused discussion on prey availability.

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Discussion: Terms of Reference

Section 3: Governance and Membership

Comments from Participants:

- Concerns were expressed by the recreational fishing and whale watch sector regarding the balance of representation on the advisory group (i.e. 5 NGO members and only 1 from ~~most~~ the~~other groups~~recreational sector for fishing and 1 from whale watching~~, such as the recreational fishing sector~~. These two sectors suggested expanding membership to increase representation among sectors and to include

- ~~It was raised that the group's membership should be expanded to include more representation from each sector, including having~~ additional experts who can speak to specifics on key threats, as this would allow for more in depth discussions on some of the issues.

- ~~Pacific Whale Watching Association noted request to have a meeting with just the whale watching sector and the government (specifically DFO). This conversation was to be taken offline.~~

- FN representative stated the importance of focusing on the objectives of the group and move beyond the differences between sector based interests and to look at how we can work together to help save the SRKW.

Response by federal officials:

- ~~The m~~Membership ~~of the group~~ should ~~be~~ reflective ~~of the~~ objectives that the advisory group ~~ultimately agrees upon.~~ ; to improve shared understanding of the complexities of SRKW recovery and shared responsibilities to reduce SRKW threats; to facilitate discussion and provide advice on actions planned by members to support SRKW recovery and to

  - ~~The intent of the advisory group is primarily to ensure effective information sharing across threats and to provide a forum to~~ address any gaps or identify opportunities for collaboration and information sharing.

  - If more technical discussion or information is required, the advisory group will refer to other existing committees as there are existing working groups and other technical discussion forums on SRKW activities. For example, existing threat-specific groups (e.g. ECHO) are intended to help flesh out specific measures.

  - Future meetings will include presentations from both federal and non-federal representatives and could include one-time participation of individuals with technical knowledge on a particular topic of interest to the group.

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Section 5: Meeting Process (Forward Agenda)

Comments from Participants:

- Discussion was held on forward agenda for Advisory Group and what topics should be covered. ~~There was specific interest from participants for further more in depth discussion on prey availability.~~

- Most participants expressed an interest in getting a better understanding on how federal activities were being advanced on each of the threats.

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- Participant interest / support for more in depth discussions on: ~~Prey~~ the potential for hatcheries to increase prey availability, prey competition from ~~Salmonid Enhancement Program Activities / Hatcheries, salmon integrated harvest planning, implications for~~ pinnipeds, impacts and benefits of netpens, outfalls in the MetroVancouver area, wastewater treatment plant contributions of sewer and estrogenic hormones, acoustic data from hydrophone network, areas of collaboration between Canada and US (e.g. contaminants).

- Interest from a whale watching sector and recreational fishery sector to have bilateral discussion with federal government representatives.

Response by federal officials:

  - Intent of the Terms of Reference is not to focus just on one threats (e.g. prey availability) but all 3 key threats including: physical and acoustic disturbance, and contaminants.

  - If the advisory group membership grows to be very large it may have an impact on the ability to have productive and focused discussions.

  - Participation should be reflective of the objectives of the advisory group.

  - Chinook recovery – existing groups that can support input on prey availability.

  - The Advisory Group Secretariat will d~~D~~raft a forward meeting agenda template ~~provided has been developed~~ for ~~your~~ consideration.

- Funding: ~~some participants~~ representatives from the recreational sector were interested in financial support for participating in meetings~~were of the view that the terms of reference should outline a process for providing funding to support members participation~~.

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Closing Remarks and Next Steps

Closing Remarks

- This group is making progress towards defining the role and scope of how it will function going forward.
- The discussion on the Terms of Reference is helping inform where the urgent and priority areas will be for discussion and we will collectively bring together the right expertise and perspectives to this forum on future discussion topics.
- This advisory group will refer to and leverage existing processes when necessary recognizing that this group will only meet around 4 times per year and make the most of each meeting. Bilateral discussions will be considered where needed.
- Participants are asked to consider your role and what you can bring to this forum.
- During today's discussion, several priority topics have been identified by the group including: ~~measures support abatement of the key threat prey availability,~~ role of hatcheries ~~(SEP)~~to increase prey availability, prey competition from pinnipeds, impacts and benefits of netpens, access to hydrophones data, fed/prov and CAN-US collaboration on key threat contaminants, outfalls in the MetroVancouver area, and contributions of wastewater treatment plants to sewage and contaminants.
- Requesting substantive feedback on draft Terms of Reference and forward meeting agenda (topics and meeting structure) by August 18.

Next Steps:

- Secretariat to circulate update presentations to participants (completed)
- Secretariat to Advisory Group will develop a meeting summary and circulate to participants in August.
- Participants to provide feedback on draft Terms of Reference by **August 18 to lee.harber@dfo-mpo.gc.ca.**
- Secretariat to circulate a template structure for future meetings with suggested theme/topics for discussion based on interests expressed by the group. i.e. forward agenda.
- Next Advisory Group meeting to take place in October, save the date will be sent out later in August.

s.19(1)
s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Davis, Neil
Sent: August-16-18 10:31 AM
To: Burns, Adam; Jenkins, Randy; Moore, Kendra; Scott, Paul G
Cc: Harber, Lee (Lee.Harber@dfo-mpo.gc.ca)
Subject: FW: News release: Crisis situation for endangered killer whales needs emergency response

Importance: High

fyi, petitions initiated on SRKWs (below). J pod remains further offshore, so little to report in terms of updates on their status and no NOAA activity or plans to report etiher. [redacted]

From: Brekke, Heather
Sent: Thursday, August 16, 2018 10:26 AM
To: Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Nener, Jennifer <Jennifer.Nener@dfo-mpo.gc.ca>; Grout, Jeff <Jeff.Grout@dfo-mpo.gc.ca>
Cc: Jones, Lisa Ann <LisaAnn.Jones@dfo-mpo.gc.ca>; McMillan, Christie <Christie.Mcmillan@dfo-mpo.gc.ca>
Subject: FW: News release: Crisis situation for endangered killer whales needs emergency response
Importance: High

FYI

From: Malikian, Janine
Sent: August-16-18 10:24 AM
To: Brekke, Heather
Cc: Webb, Cheryl
Subject: FW: News release: Crisis situation for endangered killer whales needs emergency response

Heather – FYI. Joint news release from the David Suzuki Foundation and the Raincoast Conservation Foundation calling for the closure of chinook fishing and suspension of whale-watching around SRKW.

Along the same lines, petitions on their websites:

https://www.raincoast.org/2018/08/fisheries-closures-needed-for-killer-whales/

https://davidsuzuki.org/action/save-starving-salish-sea-orcas/?sp_ref=437535565.392.190059.t.0.2

Cheers,

Janine

From: [redacted] (Times-Colonist) [mailto:L[redacted]
Sent: 2018–August-16 9:23 AM
To: Davies, Leri
Subject: FW: News release: Crisis situation for endangered killer whales needs emergency response

Good morning, Leri –

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I'm wondering if DFO will have a response to this today?

Best regards,

[redacted]
Reporter
Victoria Times Colonist
[redacted]

From: David Suzuki Foundation [mailto:media@davidsuzuki.org]
Sent: Thursday, August 16, 2018 9:13 AM
To: [redacted] (Times-Colonist)
Subject: News release: Crisis situation for endangered killer whales needs emergency response

News release from the David Suzuki Foundation and Raincoast Conservation Foundation

Crisis situation for endangered killer whales needs emergency response

Conservation groups call for Chinook fisheries closures and whale-watching restrictions for southern residents

Date: August 16, 2018

VANCOUVER — Critically endangered southern resident killer whales now require immediate closure of Chinook fisheries on B.C.'s coast and closure of all whale watching, according to the David Suzuki Foundation and the Raincoast Conservation Foundation.

"If an orca mother's prolonged display of grief and signs of starvation among J-pod don't inspire action, what will? We're in a crisis situation that requires an emergency response," said Jay Ritchlin, Western Canada director general for the David Suzuki Foundation.

Scientists and reviews by Fisheries and Oceans Canada agree that the biggest threat to the whales is a lack of abundance of and access to Chinook salmon, their favoured prey. The groups are calling on Minister of Fisheries and Oceans Jonathan Wilkinson to immediately close recreational and commercial marine Chinook fisheries. The closure will make more Chinook available to whales and will help the salmon return to their streams of origin to reproduce and ultimately rebuild. It is seen as the most effective way to reduce nutritional stress, improve birth rates and survival and reduce deaths for the southern residents.

"Recent events with J-pod, one of the three southern resident pods, has underscored the dire plight of these whales. What should be a healthy population of killer whales is failing to successfully feed, grow and reproduce. Given the federal government's failure to implement adequate threat reduction, we are calling for a closure of marine, commercial and recreational Chinook fisheries. This is the whales' best chance for survival," said Misty MacDuffee, biologist and wild salmon program director with Raincoast Conservation Foundation. As of August 2018, there have been no successful births in three years for the southern residents.

There is also a call for a closure of recreational and commercial whale watching that targets the endangered whales. "New distance regulations don't go far enough to limit disturbance to these whales as they forage for prey. We must

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limit vessel disturbance so there's a possibility that future generations will also be able to experience these whales," Ritchlin said.

The only exceptions to the full marine Chinook fishery closures would be for fisheries outside of the range of the whales and closer to spawning grounds that can demonstrate they are meeting biologically defined wild Chinook escapement targets (i.e., enough fish are returning to spawning grounds to replenish the stocks adequately).

Wild Chinook populations are in trouble. Those returning to the Fraser River before July have collapsed and 86 per cent of wild conservation units, a measurement for populations, in southern B.C. are at risk. B.C. fisheries also catch a number of endangered U.S.-bound Chinook salmon that are important to southern resident killer whales. Similar actions restricting fisheries and whale watching are also needed on the U.S. side of the border.

There is no rebuilding plan for the many highly depleted wild B.C. Chinook populations. Scientific evidence shows that artificial production of Chinook salmon, through operations such as hatcheries, can harm wild Chinook and are not suitable for rebuilding stocks.
Funding enforcement and monitoring of whale-protection measures is also needed, according to the organizations, which referred to steps taken by the government so far as partial and inadequate, voluntary, yet to begin and/or lacking timelines.

Between 1.5 and 2 million Chinook salmon are caught each year by Canadian and U.S. fisheries under the Pacific Salmon Treaty. The southern resident population requires about 1,400 Chinook each day to stay alive.

-END-

More information and media contacts:

David Suzuki Foundation
Jay Ritchlin, Director General, Western Canada
[redacted] Tel: 604 961 6840

Raincoast Conservation Foundation
Misty MacDuffee, Biologist and Wild Salmon Program Director
[redacted] Tel: 250 818 2136

Chris Genovali, Executive Director
[redacted] Tel: 250 888 3579

Backgrounder:

An emergency order under the Species at Risk Act
Southern resident killer whales are recognized as endangered under Canada's Species at Risk Act.

In May, the federal government concluded these whales face imminent threats to their survival and recovery, requiring a response under the Species at Risk Act. Five organizations — the David Suzuki Foundation, Georgia Strait Alliance, the Natural Resources Defence Council, Raincoast Conservation Foundation and WWF Canada — petitioned the minister of fisheries and oceans and minister of the environment and climate change through Ecojustice to recommend an emergency order to protect the whales. The petition identified measures including the creation of feeding refuges closed to fishing, rebuilding depleted Chinook populations, limits to whale-watching, and regulatory measures to

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address underwater noise from shipping. In addition to immediate measures on Chinook fishing and whale watching outlined above, these measures must be in place by next year.

Rather than recommend an emergency order, the ministers took limited and inadequate steps such as implementing fisheries closures in some of the whales' foraging areas and clarifying that commercial and recreational whale watchers must stay 200 metres from killer whales. These actions were not supported by adequate enforcement or monitoring, and the other actions announced are voluntary, research-oriented, yet to begin and/or lack specific timelines.

The science

Studies indicate the whales had a 25 to 50 per cent risk of extinction by the end of the century under conditions that were present prior to 2014. Those conditions have since worsened.

Nearly 70 per cent of detected pregnancies between 2008 and 2014 failed due to nutritional stress associated with lack of prey.

Research by an international team of scientists, including Raincoast staff, showed that a modelled 30 per cent increase in the coast-wide Chinook abundance above the 1979-2008 average could increase southern resident growth rate by as much as 1.9 per cent (Lacy et al., 2017). When noise and disturbance are addressed along with Chinook abundance, population viability modelling shows that a 15 per cent increase in the coast-wide abundance, coupled with a 50 per cent reduction in vessel noise and disturbance, can meet the U.S. recovery target of 2.3 per cent annual growth (based on SRKW demographics to 2014, Lacy et al. 2017).

Source: Lacy, R.C., R. Williams, E. Ashe, K.C. Balcomb, L.J. N. Brent, C.W. Clark, D.P. Croft, D.A. Giles, M. MacDuffee and P.C. Paquet. 2017. Evaluating anthropogenic threats to endangered killer whales to inform effective recovery plans. *Scientific Reports* 7, Article no: 14119 doi:10.1038/s41598-017-14471-0

Whale watching

Over the past two decades, 14 to 28 boats routinely followed southern residents in the summer months, with peak numbers exceeding 70 boats (see Ashe et al. 2010, Soundwatch 2016). The presence and noise from these vessels reduces foraging activity and limit the whales' ability to acquire prey (Lusseau et al. 2009, Noren et al. 2009, Williams et al. 2014, Lacy et al. 2017, Holt et al. 2017).

Vessel traffic and noise is known to increase the duration and amplitude of calls and is likely to adversely affect the whales by masking and altering vital communication calls.

A full marine Chinook fishery closure along B.C.'s coast is needed because:

- Given very poor returns of most Chinook salmon, and the need for Chinook by critically endangered orca, all marine fisheries for Chinook should be immediately closed.
- Monitoring of the recreational fishery is too limited to effectively manage reducing the number of fish each fisher is allowed to take. Only a full closure will ensure adequate enforcement.
- A Chinook rebuilding plan that includes habitat restoration is needed to restore wild Chinook salmon abundance at the population level.
- Hatcheries are not an effective rebuilding tool because they most often do more harm to wild salmon rather than enhancing wild populations. Hatcheries are not a substitute for rebuilding wild Chinook stocks to feed whales, which is what is needed now.
- Feeding refuges should be expanded and apply to all other fishing to ensure these whales have the space they need to forage and are sheltered from vessel disturbance so that they can catch their prey.

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This email was sent to [redacted]
David Suzuki Foundation, 219-2211 West 4th Ave, Vancouver, British Columbia V6K4S2, Canada
Unsubscribe

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Khanna, Sukriti

From: Brekke, Heather
Sent: August-17-18 3:34 PM
To: McMillan, Christie
Subject: FW: External review consultations: critical habitat section of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada

If you weren't already BCC'd on this...

From: PAC-SARA / LEP-PAC (DFO/MPO)
Sent: August-17-18 3:34 PM
To: administrator@maanulth.ca
Subject: External review consultations: critical habitat section of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada

(via Chuck Poschenrieder, Administrator)

Dear President Charlie Cootes,

Thank you for your correspondence of July 11, 2018, regarding the external review of the draft Amended Recovery Strategy for the Northern and Southern Killer Whales in Canada.

Please find attached the joint response from Fisheries and Oceans Canada and the Parks Canada Agency to the issues raised in your letter.

17Aug18
(Cootes-Maa-nu...

Sincerely,

Heather Brekke for

Karen Leslie
Regional Manager, Species at Risk Program
Fisheries and Oceans Canada / Government of Canada

Gestionnaire régional, Programme des espèces en péril
Pêches et Océans Canada / Gouvernement du Canada

Pages 3055 to / à 3056

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Page 3057

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Government of Canada / Gouvernement du Canada

Fisheries and Oceans Canada
Pacific Region
Suite 200 - 401 Burrard Street
Vancouver, British Columbia
V6C 3S4

Pêches et Océans Canada
Région du Pacifique
Pièce 200 - 401 rue Burrard
Vancouver (C.-B.)
V6C 3S4

Parks Canada Agency
Coastal British Columbia Field Unit Office
2220 Harbour Road
Sidney, BC
V8L 2P6

Agence Parcs Canada
Bureau d'unité de gestion de la Côte de la Colombie-Britannique
2220m chemin Harbour
Sidney, BC
V8L 2P6

AUG 17 2018

Mr. Charlie Cootes
President, Maa-nulth Treaty Society
5091 Tsuma-as Drive
Port Alberni, British Columbia, V9Y 8X9

Dear Mr. Cootes,

Thank you for your correspondence of July 11, 2018, in response to Fisheries and Oceans Canada (DFO) and the Parks Canada Agency (PCA) external review process on section 7 (critical habitat) of the draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada*.

We acknowledge that the external review (June 12 to July 11, 2018) coincided with a busy time of year for the Maa-nulth Treaty Society and other groups. The imminent threat of extinction faced by Southern Resident Killer Whales (SRKW)[1] led to the decision to not delay the external review, and we very much appreciate your understanding in this regard. There will be additional opportunity to provide input on the proposed Amended Recovery Strategy when it is posted to the Species at Risk Registry for a 60-day online public comment period, anticipated to begin in late August 2018. You will be notified via email in advance of this period.

We would like to take this opportunity to provide clarification on the concerns raised in your letter. No management measures are currently under consideration for the areas within which the proposed critical habitat occurs. Under the *Species at Risk Act* it is the destruction of critical habitat caused by human activities which is prohibited and not the activities themselves. If management measures for Resident Killer Whale (RKW) recovery are considered in any location, DFO will engage Indigenous groups and stakeholders through existing processes and mechanisms, and/or through other means as required.

With respect to your request for information that supported the identification of proposed additional critical habitat areas and your concerns over critical habitat identification off southwest Vancouver Island (SWVI), the identification of these proposed areas is based on science advice stemming from research carried out over the last 40 years[2]. Critical habitat is defined based both on geographical boundaries and on the presence of the biophysical features, functions and attributes within the areas required for the survival or recovery of the species and it is identified following a precautionary, risk-based approach. The availability of preferred prey

[1] https://www.canada.ca/en/fisheries-oceans/news/2018/05/government-of-canada-takes-action-to-protect-southern-resident-killer-whales.html
[2] http://www.dfo-mpo.gc.ca/csas-sccs/Publications/ResDocs-DocRech/2017/2017_035-eng.html

Canada

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(Chinook Salmon) is a key feature of critical habitat for Resident Killer Whales (RKW). Along with multi-year visual and acoustic surveys documenting the use of the SWVI area by RKW, Swiftsure and La Pérouse Banks are also identified as highly productive salmon habitat, thus meeting this requirement for critical habitat identification. As per your request, we welcome the opportunity to meet to provide further clarification before the close of the 60-day public comment period if questions remain after you have had time to review this material[2,3].

Ongoing research, including boat-based surveys, acoustic data collection, and predation studies, will continue to assess existing areas designated as critical habitat, and support any future identification of additional important habitat areas. As new information (including local and Indigenous knowledge) identifying or clarifying critical habitat becomes available, further amendments to the recovery strategy will be undertaken as appropriate. For the current amendment, all feedback received during the external review process and 60-day public comment period will be considered and the document revised as appropriate.

DFO and PCA are committed to working with Indigenous groups on issues related to species at risk in Canada. Recovery planning is an iterative process and we welcome the opportunity to work alongside your nations to understand how we can be effective in our approaches to protect and recover Resident Killer Whales.

Thank you again for your letter. We look forward to continued dialogue.

Sincerely,

Cheryl Webb
Regional Director,
Ecosystems Management Branch
Fisheries and Oceans Canada

Helen Davies
Field Unit Superintendent,
Coastal British Columbia Field Unit
Parks Canada Agency

[3] http://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2017/2017_011-eng.html

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Wong, Eva

From: Webb, Cheryl
Sent: August-17-18 8:02 AM
To: Brekke, Heather
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Attachments: #3951148-Recommendation_2018-001-01585 (JG SK) (2).docx; Scanned from a Xerox Multifunction Printer.pdf

Heather, can you take a look at redrafting as proposed by Andy.

Thanks, Cheryl

From: Wong, Eva
Sent: Thursday, August 16, 2018 4:14 PM
To: Fogliato, Cara <Cara.Fogliato@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Cc: Grout, Jeff <Jeff.Grout@dfo-mpo.gc.ca>
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hi Cheryl,

Andy has reviewed the recommendation and provided some comments for edits (see scanned document). He has suggested #2 to be re-written by the SME. I have also attached a workable copy.

Thank you so much.

Eva

From: Barton, Meagan
Sent: August-14-18 8:29 AM
To: Wong, Eva
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Attached is EMB's input for that recommendation that's due asap!

Thanks,

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Fogliato, Cara
Sent: August-14-18 8:17 AM
To: Barton, Meagan
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hi Meagan,

s.21(1)(a)

s.21(1)(b)

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Attached is EMB's input for this Recommendation for the Minister. If you have any questions give me a call.

Thank you,

Mark Johal on behalf of:

Cara Fogliato
Executive Assistant to Regional Director, Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Cara.Fogliato@DFO-mpo.gc.ca / Tel: 604-666-6285

From: Barton, Meagan
Sent: August-10-18 3:26 PM
To: Webb, Cheryl; Murdoch, Sarah; Nener, Jennifer; Lamont, Averil
Cc: Negosu, Paula; Fogliato, Cara; Lawrie, Kirsten
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi there,

Sorry for the late notice. This task is due early next week. [redacted] will be the lead and will require your input. Please submit your input to the [redacted]

Thank you so much
Eva on behalf of Meagan

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Barton, Meagan
Sent: August-10-18 11:43 AM
To: Nener, Jennifer
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi Jennifer,

[redacted]

Thanks

Eva

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[redacted]

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Church, Ashley
Sent: August-10-18 11:13 AM
To: Barton, Meagan
Cc: Lawrie, Kirsten
Subject: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi Ladies,

The following docket is for processing for the Minister

Lead: PAC - FM
Input Required From: PAC-Policy
GCCMS #: 2018-001-01585
Routed to FM and Policy in GCCMS

[redacted]

The following information will need to be included in your response:

- completed "Recommendation Template" indicating whether the Minister should attend/meet (**Y/N**)
- up to 3 bullets of context/background info for the recommendation
- the completed approval form

[redacted]

If you believe your group should not take the lead/provide input on this docket, please advise me immediately.

Please submit your documents to RDGO no later than August 13th, COB.

Thank you,

Ashley Church
Correspondence Officer | Agente de correspondance
Regional Director General's Office/Bureau Directeur Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada

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Telephone | Téléphone (604) 666-3303
Ashley.Church@dfo-mpo.gc.ca

From: Godby, Leah
Sent: August-10-18 7:52 AM
To: Church, Ashley
Cc: Langton, Erin; Mostowich, Kyla
Subject: FOR INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hello,

Please provide input for this recommendation by **COB August 14, 2018**

The following information will need to be included in your response:

- completed "Recommendation Template" indicating whether the Minister should attend/meet (**Y/N**)
- up to 3 bullets of context/background info for the recommendation
- the completed approval form
    - Please let MCU know if further approvals are needed. For example, ADM

If you need to request a **lead change**, **contact MCU immediately**. Please do not wait until the recommendation is due or late.

Please note: Should input from multiple sectors, directorates and/or regions be required, the MCU designated lead will be responsible for obtaining contributions.

Thank you for your assistance with this docket,

Leah Godby
A/Senior Analyst, Ministerial Correspondence Unit
Fisheries and Oceans Canada / Government of Canada
Leah.Godby@dfo-mpo.gc.ca / Tel: 613-991-6932

Analyste principal, Unité de la correspondance ministérielle
Pêches et Océans Canada / Gouvernement du Canada
Leah.Godby@dfo-mpo.gc.ca / Tel: 613-991-6932

MCCU Analysts/Analystes: XNCR-GrpCA/AC@dfo-mpo.gc.ca
MCCU Writers/Redacteurs: XNCR-GrpCW/RC@dfo-mpo.gc.ca

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Ministerial Correspondence / Correspondance Ministérielle Approval Form / Formulaire d'Approbation

MCCU DOCKET # / N^{O} DU DOSSIER UCCM: 2018-001-01585	MCCU CONTACT / RESPONSABLE À L'UCCM : CHANTAL BRUVELS
RECOMMENDATION/ RECOMMANDATION	

DATE AND DEADLINES / DATE ET ÉCHÉANCE

DUE DATE TO MINO / ÉCHÉANCE AU CM : (mm-dd-yyyy / mm-jj-aaaa)	8/10/2018	DATE RECEIVED IN MCCU DATE DE RÉCEPTION À L'UCCM : (mm-dd-yyyy / mm-jj-aaaa)	8/8/2018

COMMENTS / APPROACH – COMMENTAIRES / APPROCHE

APPROVALS / APPROBATIONS

Level / Niveau	Name, Title and Sector / Nom, titre et secteur	Assigned Date / Date fixée	Date Due / Échéance	Date Approved / Date d'approbation	Changes / Modifications
Director / Directeur (trice)	Jennifer Nener, Salmon Management and Client Services				
Director / Directeur (trice)	Sarah Murdoch Regional Director, Policy				
Director / Directeur (trice)	Cheryl Webb, Regional Director , Ecosystem Management Branch				
Director / Directeur (trice)	Mel Kotyk Director Aboriginal Negotiations Division				
DG Regional Director / Directeur (trice) régional(e)	Andrew Thomson, Regional Director, Fisheries Management Branch				
IF NECESSARY / SI NÉCESSAIRE					
ADM / RDG / DC / CO / AC SMA / DGR / SA / BC / CA					
Indigenous Affairs / Affaires autochtones Legal / Services juridiques IGA / AI					
IF / SI PROVINCIAL / TERRITORIAL					
DM / SM					
PCO / BCP					

OTHER CONSULTATIONS / AUTRES CONSULTATIONS

INFO COPIES TO / COPIES POUR INFORMATION À (Office, Branch, Date / Bureau, direction, date)	DEVELOPED WITH SME(S) OR OTHER STAKEHOLDER(S) / ÉLABORÉ AVEC EXPERT(S) EN LA MATIÈRE OU AUTRE(S) INTERVENANT(S) (Name, Title, Branch, Date / Nom, titre, direction, date)
•	•
OGD / AMG - (Name, Title, Branch, Date / Nom, titre, direction, date)	
•	

FOR MCCU USE / RÉSERVÉ À L'UCCM

b.c.c. / Cci – (Name, Department / Nom, ministère)	c.c. – (Name, email address / contact info / Nom, courriel, coordonnées)
•	•
ATTACHMENTS TO RESPONSE / PIÈCES JOINTES À LA RÉPONSE	
•	

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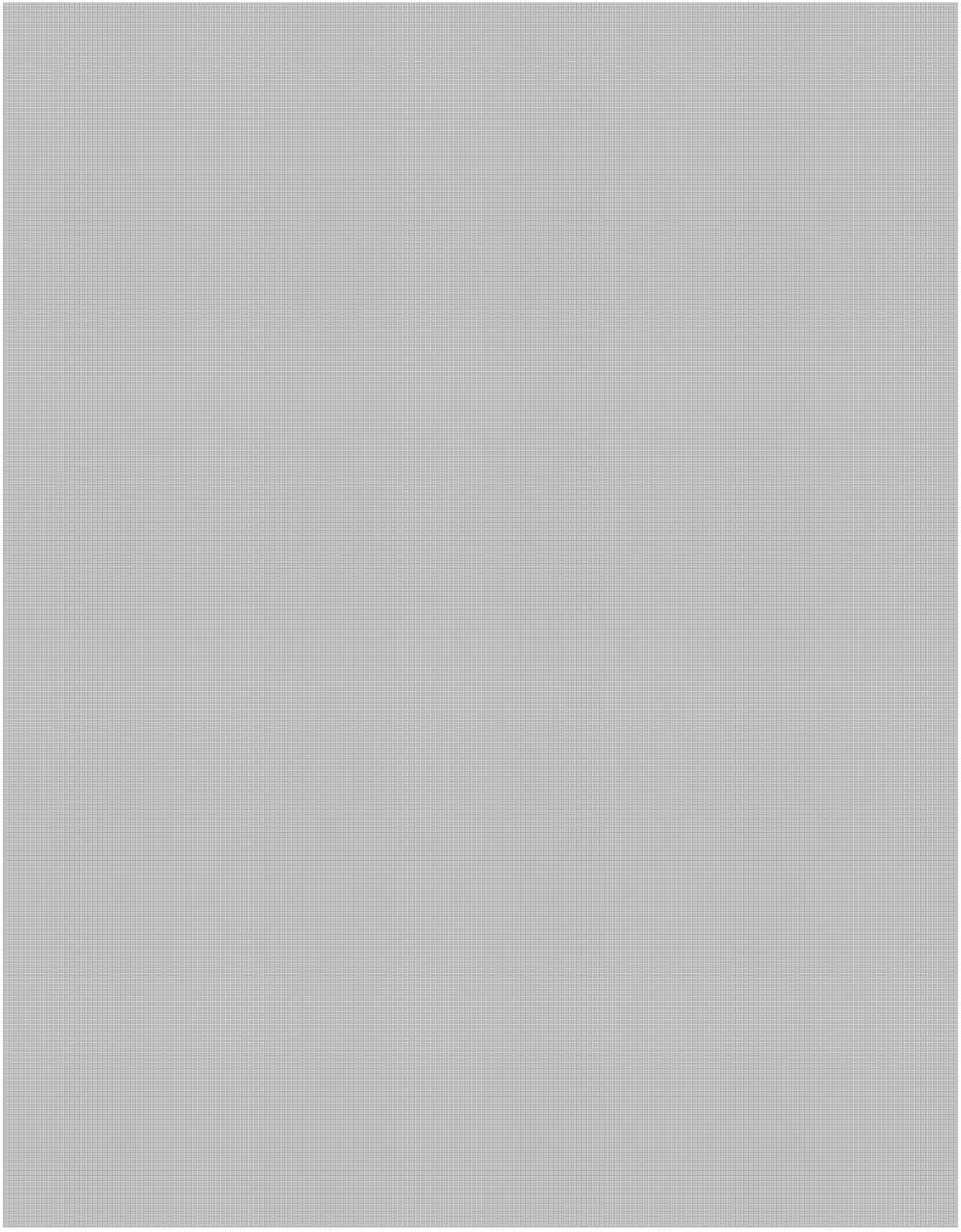
s.21(1)(a)

s.21(1)(b)

RECOMMENDATION FOR DOCKET 2018-001-01585



Pages 3066 to / à 3067

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

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s.21(1)(a)

s.21(1)(b)

Wong, Eva

From: Fogliato, Cara
Sent: August-17-18 7:59 AM
To: Brekke, Heather
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Attachments: #3951148-Recommendation_2018-001-01585 (JG SK) (2).docx; Scanned from a Xerox Multifunction Printer.pdf

Good morning Heather,

[redacted]

Attached is a workable copy of the recommendation as compiled by Fisheries Management (MS Word document), and a scanned copy with Andy's comments/edits (PDF document).

Could you please revise and incorporate Andy's comments into this section and return the revised version to me as soon as possible?

Thank you,

Mark Johal on behalf of:

Cara Fogliato
Executive Assistant to Regional Director, Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Cara.Fogliato@DFO-mpo.gc.ca / Tel: 604-666-6285

From: Wong, Eva
Sent: August-16-18 4:14 PM
To: Fogliato, Cara; Webb, Cheryl
Cc: Grout, Jeff
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hi Cheryl,

Andy has reviewed the recommendation and provided some comments for edits (see scanned document). He has suggested #2 to be re-written by the SME. I have also attached a workable copy.

Thank you so much.

Eva

From: Barton, Meagan
Sent: August-14-18 8:29 AM

s.21(1)(a)
s.21(1)(b)
Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

To: Wong, Eva
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Attached is EMB's input for that recommendation that's due asap!

Thanks,

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Fogliato, Cara
Sent: August-14-18 8:17 AM
To: Barton, Meagan
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hi Meagan,

Attached is EMB's input for this Recommendation for the Minister. If you have any questions give me a call.

Thank you,

Mark Johal on behalf of:

Cara Fogliato
Executive Assistant to Regional Director, Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Cara.Fogliato@DFO-mpo.gc.ca / Tel: 604-666-6285

From: Barton, Meagan
Sent: August-10-18 3:26 PM
To: Webb, Cheryl; Murdoch, Sarah; Nener, Jennifer; Lamont, Averil
Cc: Negosu, Paula; Fogliato, Cara; Lawrie, Kirsten
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi there,

Sorry for the late notice. This task is due early next week. [redacted] will be the lead and will require your input. Please submit your input to the [redacted]

Thank you so much
Eva on behalf of Meagan

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada

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s.21(1)(a)

s.21(1)(b)

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To: Nener, Jennifer
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi Jennifer,

[redacted]

Thanks

Eva

[redacted]

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

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meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Church, Ashley
Sent: August-10-18 11:13 AM
To: Barton, Meagan
Cc: Lawrie, Kirsten
Subject: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Importance: High

Hi Ladies,

The following docket is for processing for the Minister

Lead: PAC - FM
Input Required From: PAC-Policy
GCCMS #: 2018-001-01585
Routed to FM and Policy in GCCMS

[redacted]

s.21(1)(a)

s.21(1)(b)

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The following information will need to be included in your response:

- completed "Recommendation Template" indicating whether the Minister should attend/meet (**Y/N**)
- up to 3 bullets of context/background info for the recommendation
- the completed approval form

If you believe your group should not take the lead/provide input on this docket, please advise me immediately.

Please submit your documents to RDGO no later than August 13th, COB.

Thank you,

Ashley Church
Correspondence Officer | Agente de correspondance
Regional Director General's Office/Bureau Directeur Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Telephone | Téléphone (604) 666-3303
Ashley.Church@dfo-mpo.gc.ca

From: Godby, Leah
Sent: August-10-18 7:52 AM
To: Church, Ashley
Cc: Langton, Erin; Mostowich, Kyla
Subject: FOR INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hello,

Please provide input for this recommendation by **COB August 14, 2018**

The following information will need to be included in your response:

- completed "Recommendation Template" indicating whether the Minister should attend/meet (**Y/N**)
- up to 3 bullets of context/background info for the recommendation
- the completed approval form
    - Please let MCU know if further approvals are needed. For example, ADM

If you need to request a **lead change**, **contact MCU immediately**. Please do not wait until the recommendation is due or late.

Please note: Should input from multiple sectors, directorates and/or regions be required, the MCU designated lead will be responsible for obtaining contributions.

Thank you for your assistance with this docket,

Leah Godby
A/Senior Analyst, Ministerial Correspondence Unit
Fisheries and Oceans Canada / Government of Canada
Leah.Godby@dfo-mpo.gc.ca / Tel: 613-991-6932

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Analyste principal, Unité de la correspondance ministérielle
Pêches et Océans Canada / Gouvernement du Canada
Leah.Godby@dfo-mpo.gc.ca / Tel: 613-991-6932

MCCU Analysts/Analystes: XNCR-GrpCA/AC@dfo-mpo.gc.ca
MCCU Writers/Redacteurs: XNCR-GrpCW/RC@dfo-mpo.gc.ca

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Ministerial Correspondence / Correspondance Ministérielle Approval Form / Formulaire d'Approbation

MCCU DOCKET # / N^{O} DU DOSSIER UCCM: 2018-001-01585	MCCU CONTACT / RESPONSABLE À L'UCCM : CHANTAL BRUVELS
RECOMMENDATION/ RECOMMANDATION	

DATE AND DEADLINES / DATE ET ÉCHÉANCE

DUE DATE TO MINO / ÉCHÉANCE AU CM : (mm-dd-yyyy / mm-jj-aaaa)	8/10/2018	DATE RECEIVED IN MCCU DATE DE RÉCEPTION À L'UCCM : (mm-dd-yyyy / mm-jj-aaaa)	8/8/2018

COMMENTS / APPROACH – COMMENTAIRES / APPROCHE

APPROVALS / APPROBATIONS

Level / Niveau	Name, Title and Sector / Nom, titre et secteur	Assigned Date / Date fixée	Date Due / Échéance	Date Approved / Date d'approbation	Changes / Modifications
Director / Directeur (trice)	Jennifer Nener, Salmon Management and Client Services				
Director / Directeur (trice)	Sarah Murdoch Regional Director, Policy				
Director / Directeur (trice)	Cheryl Webb, Regional Director , Ecosystem Management Branch				
Director / Directeur (trice)	Mel Kotyk Director Aboriginal Negotiations Division				
DG Regional Director / Directeur (trice) régional(e)	Andrew Thomson, Regional Director, Fisheries Management Branch				
IF NECESSARY / SI NÉCESSAIRE					
ADM / RDG / DC / CO / AC SMA / DGR / SA / BC / CA					
Indigenous Affairs / Affaires autochtones Legal / Services juridiques IGA / AI					
IF / SI PROVINCIAL / TERRITORIAL					
DM / SM					
PCO / BCP					

OTHER CONSULTATIONS / AUTRES CONSULTATIONS

INFO COPIES TO / COPIES POUR INFORMATION À (Office, Branch, Date / Bureau, direction, date)	DEVELOPED WITH SME(S) OR OTHER STAKEHOLDER(S) / ÉLABORÉ AVEC EXPERT(S) EN LA MATIÈRE OU AUTRE(S) INTERVENANT(S) (Name, Title, Branch, Date / Nom, titre, direction, date)
•	•
OGD / AMG - (Name, Title, Branch, Date / Nom, titre, direction, date)	
•	

FOR MCCU USE / RÉSERVÉ À L'UCCM

b.c.c. / Cci – (Name, Department / Nom, ministère)	c.c. – (Name, email address / contact info / Nom, courriel, coordonnées)
•	•
ATTACHMENTS TO RESPONSE / PIÈCES JOINTES À LA RÉPONSE	
•	

s.21(1)(a)

s.21(1)(b)

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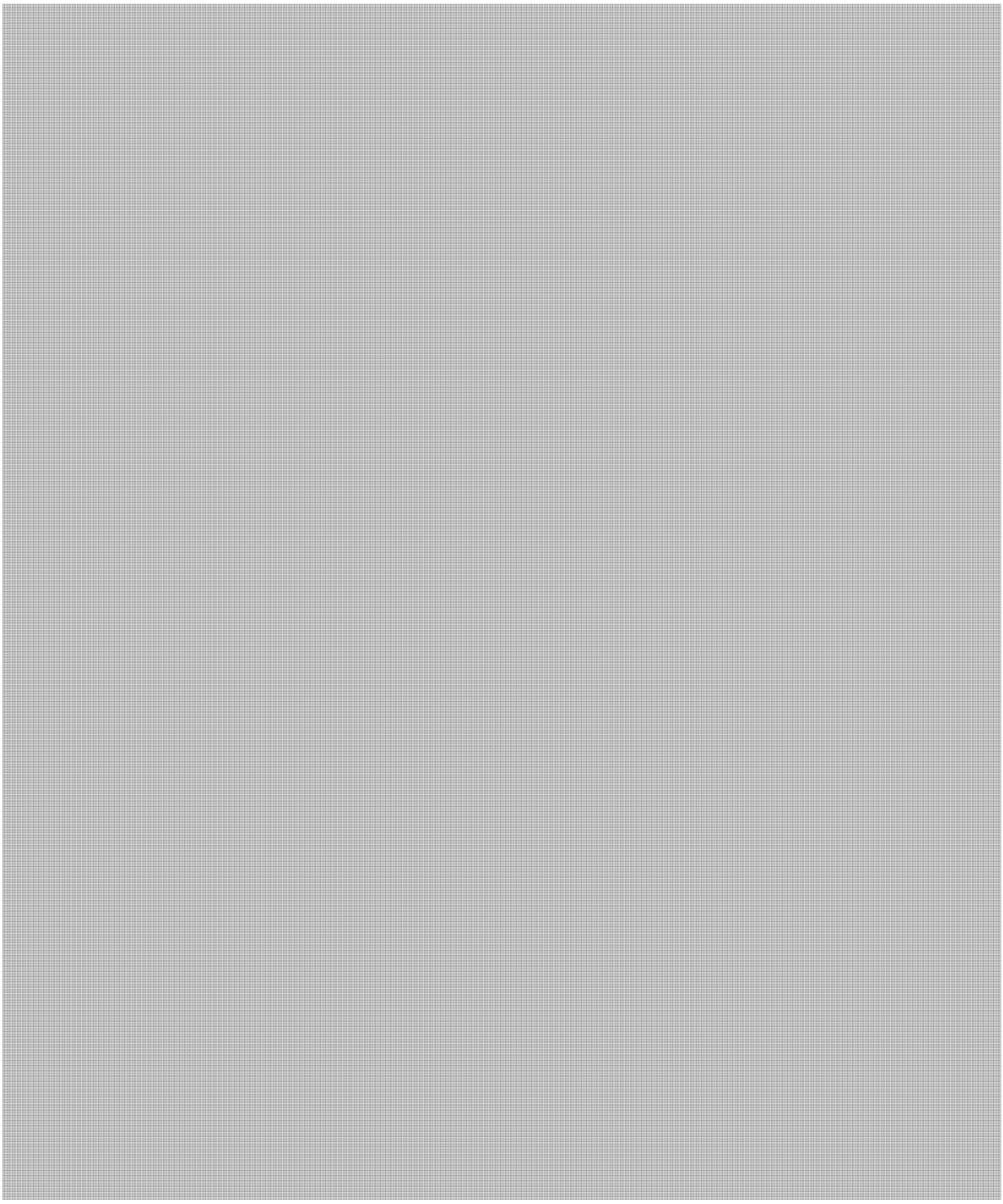
RECOMMENDATION FOR DOCKET 2018-001-01585



Pages 3075 to / à 3076

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Wong, Eva

From: Fershau, Jonathan
Sent: August-17-18 8:42 AM
To: Fogliato, Cara
Cc: McMillan, Christie; Jones, Lisa Ann; Brekke, Heather
Subject: For entry into GCCMS (Urgent)
Attachments: Attach 2B -Tuytel(Ecojustice) Response.pdf; 2018-505-000XX-Memo-RKW aRS Response Letters_lj.docx; Attach 1A-Cootes(Maa-nulth).pdf; Attach 1B - Cootes(Maa-nulth) Response.pdf; Attach 2A-Tuytel(Ecojustice)-.pdf

Hi Mark,
As discussed, please find the following note and two outgoing letters (Maa-nulth and Ecojustice) to be entered in GCCMS for Cheryl's signature.

Heather Brekke will need to sign off on the note.

Thanks...let me know if you need anything else.

jf

Jonathan Fershau
Regional Coordinator – Species at Risk
Fisheries and Oceans Canada/Pêches et Océans Canada
200-401 rue Burrard Street
Vancouver BC / C-B V6C 3S4
Tel: 604-666-2344
e-mail/courriel: Jonathan.Fershau@dfo-mpo.gc.ca

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s.21(1)(a)

s.21(1)(b)

s.23

Fisheries and Oceans Canada | Pêches et Océans Canada

Species at Risk | Espèces en péril

Regional Manager | Directeur régionale

UNCLASSIFIED
2018-505-000XX
EKME #: XXXXX

MEMORANDUM FOR THE REGIONAL DIRECTOR, ECOSYSTEMS MANAGEMENT BRANCH

RESPONSE LETTERS (2): DRAFT AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE
(FOR SIGNATURE)

SUMMARY OF ADVICE TO REGIONAL DIRECTOR, ECOSYSTEM MANAGEMENT BRANCH

[redacted]

Canada

.../2

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Heather Brekke
A/ Regional Manager, Species at Risk Program
Ecosystems Management Branch
Attachment(s): (4)

1) A. The First Nations of the Maa-nulth Treaty Society (to Cheryl Webb [DFO] and Helen Davies [PCA]) – 11 July 18 (incoming)
   B. The First Nations of the Maa-nulth Treaty Society (to Charlie Cootes, President – Maa-nulth Treaty Society) (response)
2) A. Ecojustice (to Cheryl Webb [DFO] and Helen Davies [PCA]) – 11 July 2018 (incoming)
   B. Ecojustice (to Dyna Tuytel and Margot Venton) (response)

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Fisheries and Oceans Canada
Correspondence Routing Slip

Fiche d'acheminement de correspondance
Pêches et Océans Canada

UNCLASSIFIED
GCCMS #: 2018-505-000XX
EKME #: XXXXXXX

To: / Pour: Cheryl Webb
Regional Director, Ecosystems Management Branch

Date:

Object: / Objet: **RESPONSE LETTERS (2): DRAFT AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE**

From / De: Heather Brekke, A/Regional Manager, Species at Risk Program

Additional approvals:
Autre(s) approbation(s):

☐	Material for the Minister Documents pour le Ministre	X	Your Signature Votre signature	☐	Information

Screen: / Filtre:

The Department has assessed this issue in full.

- ☒ It contains no reference to matters covered by the screen relating to J.D. Irving Limited.
- ☐ It contains matters referenced in the screen relating to J.D. Irving Limited, but in our view does not engage the screen.
- ☐ In our view, the screen relating to J.D. Irving Limited should be engaged.

Remarks: / Remarques:

Distribution: Lisa Jones, SAR Recovery Planner
Jonathan Fershau, SAR Program Coordinator

Drafting Officer/ Rédacteur: L. Jones / ck

s.19(1)

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Wong, Eva

From: PAC-SARA / LEP-PAC (DFO/MPO)
Sent: August-17-18 3:40 PM
To: [redacted]
Cc: [redacted] Webb, Cheryl; Helen.Davies@pc.gc.ca; Leslie, Karen; [redacted]
Subject: External review consultations: critical habitat section of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada

Dear Ms. Tuytel and Ms. Venton,

Thank you for your correspondence of July 11, 2018, regarding the external review of the draft Amended Recovery Strategy for the Northern and Southern Killer Whales in Canada.

Please find attached a joint response from Fisheries and Oceans Canada and the Parks Canada Agency to the issues raised in your letter.

17Aug18
(Tuytel-Ecojusti...

Sincerely,

Heather Brekke for

Karen Leslie
Regional Manager, Species at Risk Program
Fisheries and Oceans Canada / Government of Canada

Gestionnaire régional, Programme des espèces en péril
Pêches et Océans Canada / Gouvernement du Canada

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Government of Canada / Gouvernement du Canada

Fisheries and Oceans Canada
Pacific Region
Suite 200 - 401 Burrard Street
Vancouver, British Columbia
V6C 3S4

Pêches et Océans Canada
Région du Pacifique
Pièce 200 - 401 rue Burrard
Vancouver (C.-B.)
V6C 3S4

Parks Canada Agency
Coastal British Columbia Field Unit Office
2220 Harbour Road
Sidney, BC
V8L 2P6

Agence Parcs Canada
Bureau d'unité de gestion de la Côte de la Colombie-Britannique
2220m chemin Harbour
Sidney, BC
V8L 2P6

AUG 17 2018

Ms. Dyna Tuytel and Margot Venton
Ecojustice
800, 744-4 Avenue SW
Calgary, Alberta, T2P 3T4

Dear Ms Tuytel and Ms. Venton,

Thank you for your correspondence of July 11, 2018, sent on behalf of your clients the David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation, and World Wildlife Fund Canada (the "Conservation Groups"), in response to Fisheries and Oceans Canada (DFO) and the Parks Canada Agency (PCA) external review process on section 7 (critical habitat) of the draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada*.

With regard to your comments under heading II regarding the timing of the recovery strategy amendment process, the proposed Amended Recovery Strategy is anticipated to be posted on the Species at Risk (SAR) Public Registry in late August for a 60-day public comment period as required under the *Species at Risk Act*, with the final Amended Recovery Strategy posted by late November 2018. While protection through a Critical Habitat Order (CHO) is legally due within 180 days after final posting, both DFO and PCA are working toward complementary timelines, such that the order will be made by December 2018. This process has been expedited in recognition of the imminent threats to survival and recovery faced by the Southern Resident Killer Whale (SRKW).

We thank you for the general support expressed under heading III for the designation of the two proposed critical habitat areas. As for your specific request (B) to increase the approach distance to 400 m, the 200 m distance is aligned with DFO science advice [http://waves-vagues.dfo-mpo.gc.ca/Library/40600385.pdf] and the amended *Marine Mammal Regulations* published on July 11, 2018.

Thank you for your recommendation to modify the attribute description of the acoustic environment for Resident Killer Whales (Table 4; Amended Recovery Strategy). The attribute description has been updated to: "anthropogenic noise level that does not interfere with life functions and is sufficient for effective acoustic social signaling and echolocation to locate prey." "Interfere' has been used instead of 'impede' (suggested by the Conservation Groups) because sound transmission is frequently impeded by natural conditions in the environment thereby making it difficult to achieve or demonstrate unimpeded transmission.

The request (C) to acknowledge that critical habitat requires not only prey abundance but also access to prey is already addressed in the document (See page 66 under "Physical Disturbance").

Canada

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The attribute of unimpeded physical space around individual whales to support the feeding and foraging, reproduction, socializing and resting functions of critical habitat is included in Table 4.

The concerns regarding the designation of critical habitat using the bounding box approach (D) have been addressed in the proposed version of the Amended Recovery Strategy. The language describing critical habitat has been edited to clarify that the areas within the identified geographical boundaries are critical habitat, given that they contain the described biophysical features, attributes and the functions that they support. See page 57 of the proposed Amended Recovery Strategy for this updated text.

Thank you again for your letter. We welcome the opportunity to work alongside the Conservation Groups to understand how we can be effective in our approaches to protect and recover Resident Killer Whales.

Sincerely,

Cheryl Webb
Regional Director,
Ecosystems Management Branch
Fisheries and Oceans Canada

Helen Davies
Field Unit Superintendent,
Coastal British Columbia Field Unit
Parks Canada Agency

cc: Jeffery Young and Scott Wallace, David Suzuki Foundation

Christianne Wilhelmson and Rachael Merrett, Georgia Strait Alliance

Michael Jasny, Natural Resources Defense Council

Misty MacDuffee, Paul Paquet, Ross Dixon, Raincoast Conservation Foundation

Hussein Alidina, World Wildlife Fund – Canada

The Honourable Jonathan Wilkinson, Minister of Fisheries and Oceans

The Honourable Catherine McKenna, Minister of Environment and Climate Change Canada and Minister Responsible for Parks Canada

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Dozie, Juachi

From: Brekke, Heather
Sent: August-17-18 8:36 AM
To: Webb, Cheryl; Fogliato, Cara
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018
Attachments: #3951148-Recommendation_2018-001-01585 (JG SK) (2)_hb.docx

Hi Cheryl and Cara,

Please see my suggested edits attached. Note I have already reviewed this, but do agree with some of the restructuring Andy suggests.

Note I am out of the office from 9-11am, if you require further assistance on this, please contact Christie McMillan.

Thanks
Heather

From: Webb, Cheryl
Sent: August-17-18 8:02 AM
To: Brekke, Heather
Subject: FW: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Heather, can you take a look at redrafting as proposed by Andy.

Thanks, Cheryl

From: Wong, Eva
Sent: Thursday, August 16, 2018 4:14 PM
To: Fogliato, Cara <Cara.Fogliato@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Cc: Grout, Jeff <Jeff.Grout@dfo-mpo.gc.ca>
Subject: RE: FOR URGENT INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hi Cheryl,

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Thank you so much.

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s.21(1)(a)

s.21(1)(b)

Thanks,

Meagan Barton
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Thank you,

Mark Johal on behalf of:

Cara Fogliato
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Importance: High

Hi there,

Sorry for the late notice. This task is due early next week. [redacted] will be the lead and will require your input. Please submit your input to the [redacted]

Thank you so much
Eva on behalf of Meagan

Meagan Barton
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s.21(1)(a)
s.21(1)(b)
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To: Nener, Jennifer
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Importance: High

Hi Jennifer,

[redacted]

Thanks

Eva

[redacted]

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

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Sent: August-10-18 11:13 AM
To: Barton, Meagan
Cc: Lawrie, Kirsten
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Importance: High

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Lead: PAC - FM
Input Required From: PAC-Policy
GCCMS #: 2018-001-01585
Routed to FM and Policy in GCCMS

[redacted]

The following information will need to be included in your response:

- completed "Recommendation Template" indicating whether the Minister should attend/meet (**Y/N**)
- up to 3 bullets of context/background info for the recommendation

s.21(1)(a)
s.21(1)(b)
Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

- the completed approval form

[redacted]

If you believe your group should not take the lead/provide input on this docket, please advise me immediately.

Please submit your documents to RDGO no later than August 13th, COB.

Thank you,

Ashley Church
Correspondence Officer | Agente de correspondance
Regional Director General's Office/Bureau Directeur Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Telephone | Téléphone (604) 666-3303
Ashley.Church@dfo-mpo.gc.ca

From: Godby, Leah
Sent: August-10-18 7:52 AM
To: Church, Ashley
Cc: Langton, Erin; Mostowich, Kyla
Subject: FOR INPUT: Recommendation 2018-001-01585 BF: COB August 14, 2018

Hello,

Please provide input for this recommendation by **COB August 14, 2018**

[redacted]

The following information will need to be included in your response:

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- the completed approval form
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Please note: Should input from multiple sectors, directorates and/or regions be required, the MCU designated lead will be responsible for obtaining contributions.

Thank you for your assistance with this docket,

Leah Godby
A/Senior Analyst, Ministerial Correspondence Unit
Fisheries and Oceans Canada / Government of Canada
Leah.Godby@dfo-mpo.gc.ca / Tel: 613-991-6932

Analyste principal, Unité de la correspondance ministérielle
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MCCU Analysts/Analystes: XNCR-GrpCA/AC@dfo-mpo.gc.ca
MCCU Writers/Redacteurs: XNCR-GrpCW/RC@dfo-mpo.gc.ca

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Ministerial Correspondence / Correspondance Ministérielle Approval Form / Formulaire d'Approbation

MCCU DOCKET # / N° DU DOSSIER UCCM: 2018-001-01585	MCCU CONTACT / RESPONSABLE À L'UCCM : CHANTAL BRUVELS
RECOMMENDATION/ RECOMMANDATION	

DATE AND DEADLINES / DATE ET ÉCHÉANCE

DUE DATE TO MINO / ÉCHÉANCE AU CM : (mm-dd-yyyy / mm-jj-aaaa)	8/10/2018	**DATE RECEIVED IN MCCU DATE DE RÉCEPTION À L'UCCM :** (mm-dd-yyyy / mm-jj-aaaa)	8/8/2018

COMMENTS / APPROACH – COMMENTAIRES / APPROCHE

APPROVALS / APPROBATIONS

Level / Niveau	Name, Title and Sector / Nom, titre et secteur	Assigned Date / Date fixée	Date Due / Échéance	Date Approved / Date d'approbation	Changes / Modifications
Director / Directeur (trice)	Jennifer Nener, Salmon Management and Client Services				
Director / Directeur (trice)	Sarah Murdoch Regional Director, Policy				
Director / Directeur (trice)	Cheryl Webb, Regional Director , Ecosystem Management Branch				
Director / Directeur (trice)	Mel Kotyk Director Aboriginal Negotiations Division				
DG Regional Director / Directeur (trice) régional(e)	Andrew Thomson, Regional Director, Fisheries Management Branch				
IF NECESSARY / SI NÉCESSAIRE					
ADM / RDG / DC / CO / AC SMA / DGR / SA / BC / CA					
Indigenous Affairs / Affaires autochtones Legal / Services juridiques IGA / AI					
IF / SI PROVINCIAL / TERRITORIAL					
DM / SM					
PCO / BCP					

OTHER CONSULTATIONS / AUTRES CONSULTATIONS

INFO COPIES TO / COPIES POUR INFORMATION À (Office, Branch, Date / Bureau, direction, date)	**DEVELOPED WITH SME(S) OR OTHER STAKEHOLDER(S) / ÉLABORÉ AVEC EXPERT(S) EN LA MATIÈRE OU AUTRE(S) INTERVENANT(S)** (Name, Title, Branch, Date / Nom, titre, direction, date)
•	•
OGD / AMG - (Name, Title, Branch, Date / Nom, titre, direction, date)	
•	

FOR MCCU USE / RÉSERVÉ À L'UCCM

b.c.c. / Cci – (Name, Department / Nom, ministère)	c.c. – (Name, email address / contact info / Nom, courriel, coordonnées)
•	•
ATTACHMENTS TO RESPONSE / PIÈCES JOINTES À LA RÉPONSE	
•	

Field Code Changed

s.21(1)(a)

s.21(1)(b)

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RECOMMENDATION FOR DOCKET 2018-001-01585

[redacted]

Pages 3091 to / à 3093
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

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Khanna, Sukriti

From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: August-17-18 7:43 AM
To: Cottrell, Paul
Subject: MEHDS Preliminary Results - J50 more to follow. s
Attachments: MEHDS Preliminary Report - J50 August 2018.pdf

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UNIVERSITY OF CALIFORNIA, DAVIS

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SCHOOL OF VETERINARY MEDICINE
WILDLIFE HEALTH CENTER
UNIVERSITY OF CALIFORNIA
(530) 752-4167
FAX (530) 752-3318
http://www.vetmed.ucdavis.edu/whc

ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616-8734

16 August 2018

UC Davis Marine Ecosystem Health Diagnostic & Surveillance Laboratory

Client: Dr. Joe Gaydos, SeaDoc Society, UC Davis Wildlife Health Center

Preliminary Bacterial and Fungal culture Results for J50:

Veterinary Medical Teaching Hospital
University of California, Davis

16Aug18 at 11:30am.

Microbiology 18M06997 24_Hour Report

Patient#: **Tag#:** X0mhl1(J50) **Breed:** OSA-KILLER WHALE **Sex:** F **Color:** **Birth:**	**Client#:** X0MHL1 **Client:** VM Whc Marine Ecohealth Lab **Address:** Tracy Goldstein Research **City, St:** Davis, CA 95616 **Home Phone:** 530 752 3859 **Other Phone:** 530 752 3859 530 752 3318FAX
Request#: 18M06997 **Requested:** 15Aug18 **Comment:** FECES. PLEASE EMAIL RESULTS TO TGOLDSTEIN@UCDAVIS.EDU	**Visit#:** 516264M **Clinician:** No Doctor # **Tech:** **Location:**

Procedures Requested:

8019	Sea otter fecal protocol
8011	Diagnostic bacteriology, aerobic, marine
8039	Fungal Identification

Specimen #1	
Specimen	FECES
Collection Method	UNKNOWN
Comment	
Organisms	NO SALMONELLA SP. CULTURED TO DATE. NO STREPT. BOVIS/EQUINUS COMPLEX CULTURED TO DATE. VIBRIO CULTURE PENDING. CAMPYLOBACTER CULTURE PENDING. ANAEROBIC CULTURE PENDING. NO FUNGAL GROWTH TO DATE

Comment:
No bacteria or fungi have been cultured from the sample from J50 to date, additional results are pending.

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Mbarushimana, Jenny

From: Webb, Cheryl
Sent: August-17-18 6:45 AM
To: Thomson, Andrew; Davis, Neil
Subject: FW: Situation Report for DM August 17
Attachments: MECTS-#3952364-v2-Situation_Report_for_DM_17Aug2018.DOCX

Andy/Neil, it does not look like you get these...can you confirm. If not, I will ask that you be added to the distribution, as they are a 'Whales Situation Report'.

From: Van Bemmel, Alexis
Sent: Friday, August 17, 2018 6:28 AM
To: Goetze, Darren <Darren.Goetze@dfo-mpo.gc.ca>; Perry, Jacqueline <Jacqueline.Perry@dfo-mpo.gc.ca>; Lambert, Robert <Robert.Lambert@dfo-mpo.gc.ca>; Doucet, Serge <Serge.Doucet@dfo-mpo.gc.ca>; Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>; Laverdure, Louise <Louise.Laverdure@dfo-mpo.gc.ca>; Morel, Philippe <Philippe.Morel@dfo-mpo.gc.ca>; Pelletier, Mario <Mario.Pelletier@dfo-mpo.gc.ca>; Lick, Gregory <Gregory.Lick@dfo-mpo.gc.ca>; Hubley, Marian <Marian.Hubley@dfo-mpo.gc.ca>; 'mike.beale@canada.ca' <mike.beale@canada.ca>; marc.diorio@canada.ca; Goodier, Gwen (EC) <gwen.goodier@canada.ca>; Spicer, Mary-Ann (EC) <mary-ann.spicer@canada.ca>; Marshall, Christopher (EC) <christopher.marshall@canada.ca>; 'natasha.rascanin@tc.gc.ca' <natasha.rascanin@tc.gc.ca>; Weldon, Jane <jane.weldon@tc.gc.ca>; Jackson, Ashley <Ashley.Jackson@dfo-mpo.gc.ca>; Sanders , Michelle <michelle.sanders@tc.gc.ca>; TC.MSSWhales <TC.MSSWhales-BaleinesSSM.TC@tc.gc.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>; Dwyer, Judy <Judy.Dwyer@dfo-mpo.gc.ca>; Hill, Jonathan <Jonathan.Hill@dfo-mpo.gc.ca>; Sicard, Marc <Marc.Sicard@dfo-mpo.gc.ca>; MacDonald, Jeff (NCR) <Jeffery.MacDonald@dfo-mpo.gc.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; Brisebois, Luc <luc.brisebois@tc.gc.ca>; Blanchard, Tony <Tony.Blanchard@dfo-mpo.gc.ca>; Bouchard, Nicole <Nicole.Bouchard@dfo-mpo.gc.ca>; Werszko, Elizabeth <elizabeth.werszko@tc.gc.ca>; Bliss, Doug <Doug.Bliss@dfo-mpo.gc.ca>; Slaney, LLoyd <Lloyd.Slaney@dfo-mpo.gc.ca>; LeBlanc, Denise <Denise.LeBlanc@dfo-mpo.gc.ca>; Finn, Ray <Ray.Finn@dfo-mpo.gc.ca>; Pike, Kelly J <Kelly.Pike@dfo-mpo.gc.ca>; Cahill, Paul <Paul.Cahill@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Smith, Darlene <Darlene.Smith@dfo-mpo.gc.ca>; Bettencourt, Tracy <Tracy.Bettencourt@dfo-mpo.gc.ca>; Goulet, Yves <Yves.Goulet@dfo-mpo.gc.ca>
Cc: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Subject: RE: Situation Report for DM August 17

Hi everyone,

Just a friendly reminder to send me any input you may have by 11am EST today.

Thank you,
Alexis

From: Van Bemmel, Alexis
Sent: August-16-18 11:21 AM
To: Goetze, Darren; Perry, Jacqueline; Lambert, Robert; Valkenier, Mary-Ellen; Doucet, Serge; Vincent, Patrick; Reid, Rebecca; McPherson, Arran; Laverdure, Louise; Morel, Philippe; Pelletier, Mario; Lick, Gregory; Hubley, Marian; 'mike.beale@canada.ca'; 'marc.diorio@canada.ca'; 'Goodier, Gwen (EC)'; 'Spicer, Mary-Ann (EC)'; 'Marshall, Christopher (EC)'; 'natasha.rascanin@tc.gc.ca'; Weldon, Jane; Jackson, Ashley; 'Sanders , Michelle'; Landry, Jean; TC.MSSWhales; Stewart, Julie; Dwyer, Judy; Hill, Jonathan; Sicard, Marc; MacDonald, Jeff (NCR); Thomson, Andrew; Busby, Corina; Brisebois, Luc; Blanchard, Tony; Bouchard, Nicole; Werszko, Elizabeth; Bliss, Doug; Slaney, LLoyd; LeBlanc, Denise; Finn, Ray; Pike, Kelly J; Cahill, Paul; Webb, Cheryl; Smith, Darlene; Bettencourt, Tracy; Goulet, Yves

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Cc: Jenkins, Randy
Subject: RE: Situation Report for DM August 17

Hi everyone,

Please find attached a draft sit rep for the DM. Again, this one is pretty light, so input on your respective issues will be very much appreciated! Please provide to me by 10am EST tomorrow.

Many thanks,
Alexis

Alexis Van Bemmel
Fisheries and Aquaculture Management Officer |
Agent, Gestion des pêches et de l'aquaculture
Fisheries and Oceans | Pêches et océans
200 rue Kent Street - 13S002A Ottawa, ON, K1A 0E6
Alexis.VanBemmel@dfo-mpo.gc.ca
Telephone | Téléphone (613) 402-7832
Facsimile | Télécopieur (613) 990-7051
Government of Canada | Gouvernement du Canada

s.21(1)(a)
s.21(1)(b)

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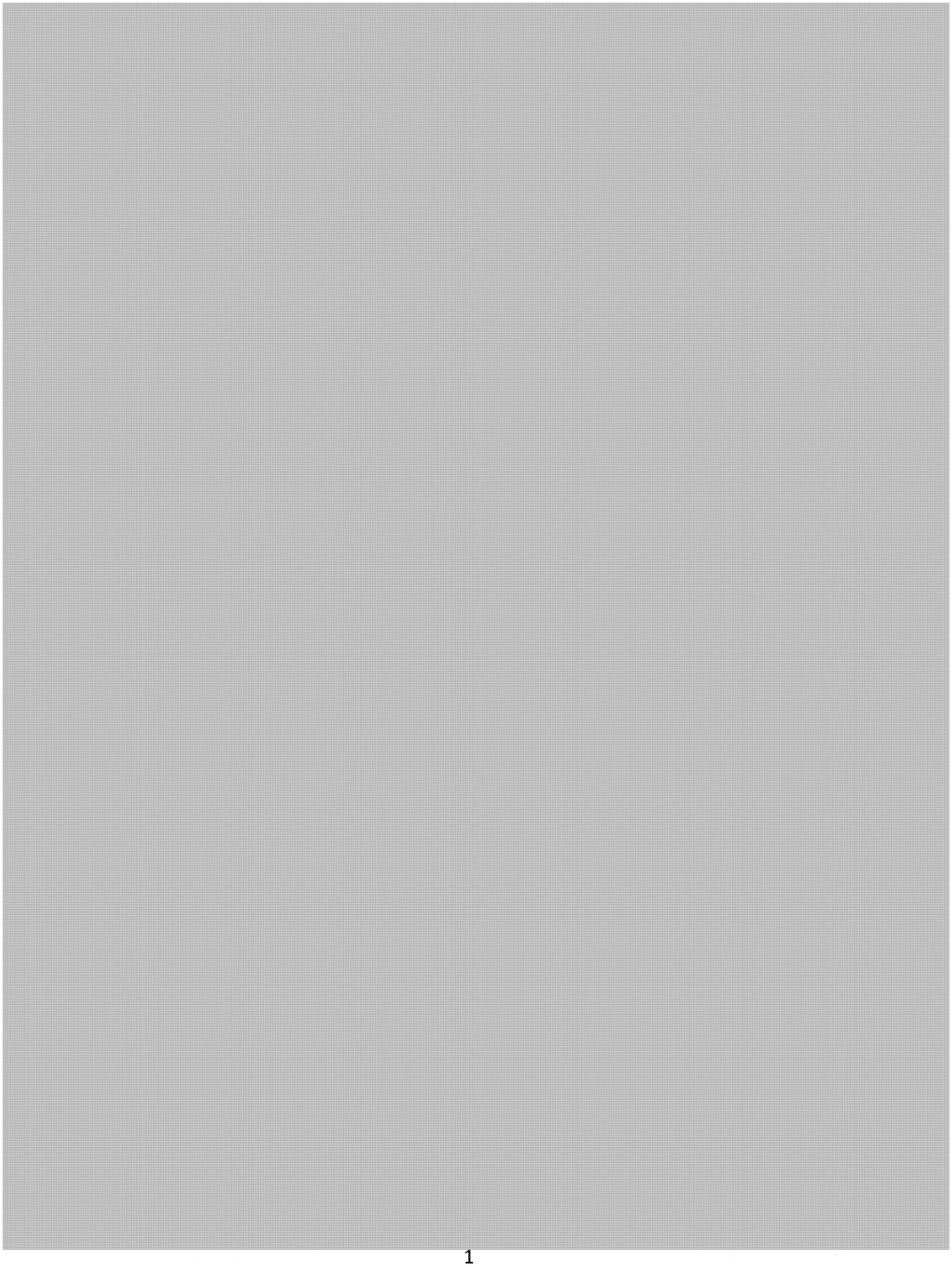
Situational Report – Whale Issues – August 17, 2018



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s.21(1)(a)

s.21(1)(b)

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

[redacted]

- **Southern Resident Killer Whale (SRKW) Update**:

[redacted]

-
-

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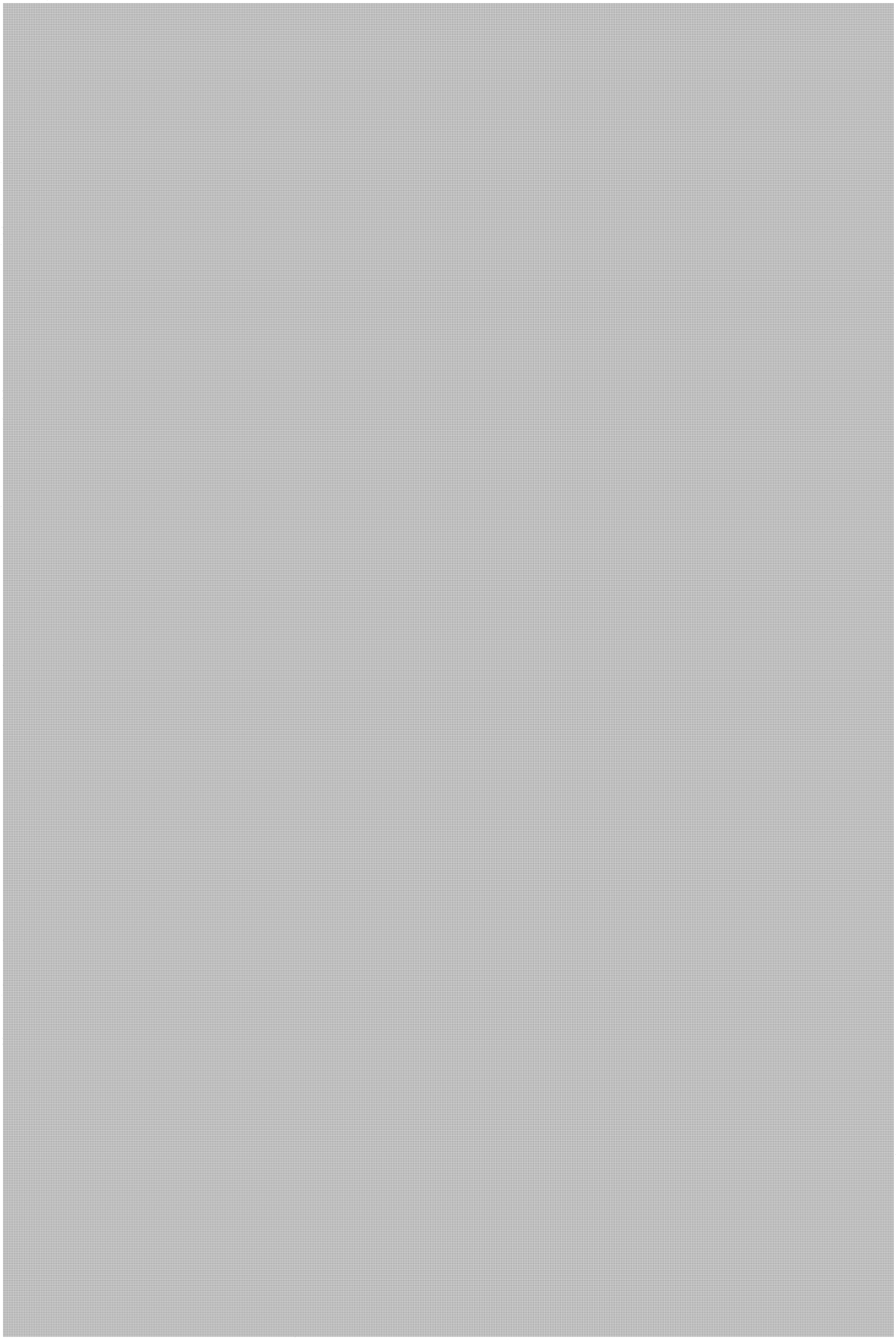
s.21(1)(a)

s.21(1)(b)



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s.21(1)(a)
s.21(1)(b)
s.69(1)(g) re: (a)
s.69(1)(g) re: (e)

- [redacted]
  - On July 16, Ecojustice sent another letter to the Ministers and Deputy Ministers of DFO, ECCC and TC again calling for the establishment of an Emergency Order for the SRKW. They requested a meeting to further discuss the protection measures in place.
- [redacted]
- [redacted]

s.21(1)(a)

s.21(1)(b)

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Dozie, Juachi

From: Cottrell, Paul
Sent: August-17-18 11:24 AM
To: Thomson, Andrew; Davis, Neil; Harber, Lee
Subject: Re: Whale watching industry - outreach

Yes, we regularly meet with industry and have consulted on these regulations for the last 16 years as the proposed regs evolved.
Now that the regs were approved as of mid July we can discuss the new regs. There are some section 7 additions such as mom and calf pairs and 200 m approach distance and the viewing of cetaceans on the offshore side and not splitting up groups of animals by viewing between groups, which are portions of the new regs which I was not aware were going to be in the new regs (these were late additions). These are the portions which I assume the WW industry wants clarification on.

Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Thomson, Andrew
Sent: Friday, August 17, 2018 11:09 AM
To: Cottrell, Paul; Davis, Neil; Harber, Lee
Subject: Re: Whale watching industry - outreach

Did we specifically inform the BC industry of the change in regs and offer any meetings with them?

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Cottrell, Paul
Sent: Friday, August 17, 2018 9:58 AM
To: Thomson, Andrew; Davis, Neil; Harber, Lee
Subject: Re: Whale watching industry - outreach

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[redacted]

Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Thomson, Andrew
Sent: Friday, August 17, 2018 9:54 AM
To: Cottrell, Paul; Davis, Neil; Harber, Lee
Subject: Re: Whale watching industry - outreach

So we could (with NCR lead / assistance for consistency) have a meeting with the industry to answer their specific questions.

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Cottrell, Paul
Sent: Friday, August 17, 2018 9:52 AM
To: Thomson, Andrew; Davis, Neil; Harber, Lee
Subject: Re: Whale watching industry - outreach

Hi Andy,
Yes, I think the industry is fully aware of the new regs. They may be looking for clarification/explainations on mother pair definitions and the inshore/offshore placement of vessels when viewing. [redacted] As you say, the WW industry would like to be exempt from the 200 m killer whale approach distance for KW populations which are not SRKW's. Hope this is useful.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Thomson, Andrew
Sent: Friday, August 17, 2018 9:06 AM
To: Davis, Neil; Cottrell, Paul; Harber, Lee
Subject: Whale watching industry - outreach

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Apparently I may be getting an invite to a MINO briefing this morning on the MMR and what we have done to inform the whale watching industry and what we could do, like a tech briefing.

I don't know what the concern is - I don't get the sense that the WW industry doesn't understand the regs - they just want to be exempt from them. Please correct if I have it wrong.

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

s.21(1)(a)

s.21(1)(b)

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Dozie, Juachi

From: Davis, Neil
Sent: August-17-18 1:53 PM
To: Barton, Meagan
Cc: Khanna, Sukriti; Harber, Lee
Subject: RE: URGENT TASKING // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

From: Barton, Meagan
Sent: Friday, August 17, 2018 12:10 PM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Khanna, Sukriti <Sukriti.Khanna@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: RE: URGENT TASKING // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

Hi Neil,

Andy has asked the following question on Slide/Page 12:

I'm keeping the hard copy on your desk for review.

Thanks,
Sukriti

for

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Davis, Neil
Sent: August-17-18 10:57 AM
To: Barton, Meagan; Webb, Allison
Cc: Delaney, Paula; Wilkinson, Davida; Khanna, Sukriti; Harber, Lee
Subject: RE: URGENT TASKING // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

Meagan

Here is the deck. Lee and I made edits highlighted in red

s.21(1)(a)

s.21(1)(b)

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From: Barton, Meagan
Sent: Friday, August 17, 2018 9:20 AM
To: Webb, Allison <Allison.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Delaney, Paula <Paula.Delaney@dfo-mpo.gc.ca>; Wilkinson, Davida <Davida.Wilkinson@dfo-mpo.gc.ca>; Khanna, Sukriti <Sukriti.Khanna@dfo-mpo.gc.ca>
Subject: FW: URGENT TASKING // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman
Importance: High

Hi Allison and Neil,

The following is **due to the RD FM by 11:00AM today**. Sorry for the short turnaround time. **Would you be able to identify SMEs** for your groups. If this does not belong to you, would you be able to direct me to the right contact and/or if someone else also needs to be added.

Thanks,
Sukriti

for
Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Church, Ashley
Sent: August-17-18 8:40 AM
To: Barton, Meagan
Cc: Lawrie, Kirsten; MacKenzie, Julia; Good, Gaby
Subject: URGENT TASKING // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

Good morning,

The following docket is for processing for the Minister.

Lead: AE
Input Required From: PAC [FM and Policy] FHM, SP
GCCMS #: 2018-009-00475
Routed to FM and Policy in GCCMS

Information: Please prepare a SN for a meeting with Minister Popham and Heyman taking place Friday, August 24th in Victoria. Note that the SN should cover SRKW and include the attached deck that will be used during the briefing (draft provided earlier by Department), [redacted]

FM and Policy, Please provide me with your SME's, so that I can pass them onto AE. Also see email from Sarah Murdoch.

BC ones generally always go through Policy, because of cross cutting range of issues, however since Kirsten, Freya and I all away today and topics both FM. Julia will need to be looped in t[redacted]

s.21(1)(a)
s.21(1)(b)
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[redacted]

Thank you,

Ashley Church
Correspondence Officer | Agente de correspondance
Regional Director General's Office/Bureau Directeur Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Telephone | Téléphone (604) 666-3303
Ashley.Church@dfo-mpo.gc.ca

From: Murdoch, Sarah
Sent: August-17-18 8:27 AM
To: Johal, Sharan; Church, Ashley
Cc: MacKenzie, Julia; Lawrie, Kirsten
Subject: Re: **New Tasking** // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

BC ones generally always go through Policy, because of cross cutting range of issues, however since Kirsten, Freya and I all away today and topics both FM. Julia will need to be looped in though [redacted]

Hope that's helpful. Off but will have my BlackBerry today

SM

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Johal, Sharan
Sent: Friday, August 17, 2018 8:17 AM
To: Church, Ashley; Murdoch, Sarah
Subject: RE: **New Tasking** // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

Sarah, given [redacted] SRKW focus… would this be best to flip to Andy and Allison. Would it help to have input coordinated through your shop as well?

Ashley is that 4pm PST or EST?

Let me know what you think!

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

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From: Church, Ashley
Sent: August-17-18 7:36 AM
To: Murdoch, Sarah; Johal, Sharan
Subject: FW: **New Tasking** // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

As requested – Flagging to your attention. Please let me know how to proceed. AE would like to have input to them by 4PM their time.

Ashley Church
Correspondence Officer | Agente de correspondance
Regional Director General's Office/Bureau Directeur Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Telephone | Téléphone (604) 666-3303
Ashley.Church@dfo-mpo.gc.ca

From: D'Angelo, Louise-Anne
Sent: August-17-18 5:54 AM
To: Ahpiang, Melanie; Daspe, Caroline
Cc: Richter, Julie; XNCR-Grp, DMO Correspondence & Briefing Unit; Villeneuve, Anne-Marie; Butcher, Ashley; Johal, Sharan; Kaba, Kyle; Turple, Justin; Belle-Isle, Alain; Church, Ashley; SP-SADMO / BSMAP-PS (DFO/MPO); Kaleta, Michelle; Iacovitti, Michelle; Patrick, Lindsey
Subject: **New Tasking** // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

Good morning,

Please process the following docket for the Minister:

Title: Meeting with Minister Popham and Heyman
Deliverable: Scenario Note for the Minister
Lead: AE
Input: PAC, FHM, SP

GCCMs#: 2018-009-00475

BF in DMO: Monday, August 20, 2018

Instructions / Supplementary Information: Please prepare a SN for a meeting with Minister Popham and Heyman taking place Friday, August 24th in Victoria. Note that the SN should cover SRKW and include the attached deck that will be used during the briefing (draft provided earlier by Department), The discussion on

****
If you require an extension or clarification after consulting with your Group's program(s) and/or manager, please email DMO.CBUnit@dfo-mpo.gc.ca
****
Thank you!

Louise Anne D'Angelo
Receptionist/Correspondence Officer/Receptioniste/ Analyste de la correspondance

s.21(1)(a)

s.21(1)(b)

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Deputy Minister's Office/Bureau du sous-ministre
Fisheries and Oceans Canada/Pêches et Océans Canada
Louise-anne.dangelo@dfo-mpo.gc.ca Tel: 993-2200

From: Butcher, Ashley
Sent: August-16-18 8:43 PM
To: XNCR-Grp, DMO Correspondence & Briefing Unit
Cc: Richter, Julie; Patrick, Lindsey; Johal, Sharan; Kaba, Kyle
Subject: New Tasking: Meeting with Minister Popham and Heyman

Hello – please assign the following in GCCMS:

Title: Meeting with Minister Popham and Heyman
Deliverable: Scenario Note for the Minister
Lead: AE
Input: PAC, FHM
BF in DMO: August 20, 2018
Instructions / Supplementary Information: Please prepare a SN for a meeting with Minister Popham and Heyman taking place Friday, August 24th in Victoria. Note that the SN should cover SRKW and include the attached deck that will be used during the briefing (draft provided earlier by Department), [redacted] The discussion on [redacted]

Thanks,

Ashley Butcher
A/DA
(613) 947-4561

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

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Davis, Neil

From: Davis, Neil
Sent: Friday, August 17, 2018 4:43 PM
To: Thorleifson, Erika; Winfield, Nicholas; Burns, Adam; Laverdure, Louise; Goetze, Darren; Beaton, Heather (DOJ); Busby, Corina; Legault, Josee (DOJ); Sicard, Marc; Jenkins, Randy; Stewart, Julie; Webb, Cheryl; Thomson, Andrew
Cc: Dwyer, Judy; Verville, Josée Annie; Nadeau, Simon; Orok, Rowena; Gilchrist, Brett; Brekke, Heather
Subject: RE: SRKW
Attachments:

Hi all,

[redacted]

Neil

From: Thorleifson, Erika
Sent: Friday, August 10, 2018 12:32 PM
To: Winfield, Nicholas <Nicholas.Winfield@dfo-mpo.gc.ca>; Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Laverdure, Louise <Louise.Laverdure@dfo-mpo.gc.ca>; Goetze, Darren <Darren.Goetze@dfo-mpo.gc.ca>; Beaton, Heather (DOJ) <Heather.Beaton@justice.gc.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>; Legault, Josee (DOJ) <Josee.Legault@justice.gc.ca>; Sicard, Marc <Marc.Sicard@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: Dwyer, Judy <Judy.Dwyer@dfo-mpo.gc.ca>; Verville, Josée Annie <Josee-Annie.Verville@dfo-mpo.gc.ca>; Nadeau, Simon <Simon.Nadeau@dfo-mpo.gc.ca>; Orok, Rowena <Rowena.Orok@dfo-mpo.gc.ca>; Gilchrist,

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Brett <Brett.Gilchrist@dfo-mpo.gc.ca>
Subject: RE: SRKW [redacted]

Hi all,

Further to our discussion this morning, could you please send any comments that you have on [redacted] document to me by Friday, August 17.

Thanks,
Erika

-----Original Appointment-----
From: Dieudonné, Rilene **On Behalf Of** Winfield, Nicholas
Sent: August-09-18 3:42 PM
To: Burns, Adam; Laverdure, Louise; Goetze, Darren; Beaton, Heather (DOJ); Busby, Corina; Thorleifson, Erika; Legault, Josee (DOJ); Sicard, Marc; Scott, Paul G; Jenkins, Randy; Stewart, Julie; Webb, Cheryl; Davis, Neil; Thomson, Andrew
Cc: Dwyer, Judy; Verville, Josée Annie; Nadeau, Simon; Orok, Rowena; Gilchrist, Brett
Subject: SRKW [redacted]
When: August-10-18 11:00 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: 10W84 (Nick's Office) or 1-877-413-4788 ID#5581586

[redacted]

Pages 3112 to / à 3114

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pages 3360 to / à 3362

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Khanna, Sukriti

From: Davis, Neil
Sent: August-17-18 10:57 AM
To: Barton, Meagan; Webb, Allison
Cc: Delaney, Paula; Wilkinson, Davida; Khanna, Sukriti; Harber, Lee (Lee.Harber@dfo-mpo.gc.ca)
Subject: RE: URGENT TASKING // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman
Attachments: MECTS-#3953269-v1-MECTS-#3953240-v1-Current_Issues_Deck_-August_2018 v2-SRK ND edits.ppt

Meagan

Here is the deck. Lee and I made edits highlighted in red

From: Barton, Meagan
Sent: Friday, August 17, 2018 9:20 AM
To: Webb, Allison <Allison.Webb@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Delaney, Paula <Paula.Delaney@dfo-mpo.gc.ca>; Wilkinson, Davida <Davida.Wilkinson@dfo-mpo.gc.ca>; Khanna, Sukriti <Sukriti.Khanna@dfo-mpo.gc.ca>
Subject: FW: URGENT TASKING // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman
Importance: High

Hi Allison and Neil,

The following is **due to the RD FM by 11:00AM today**. Sorry for the short turnaround time. **Would you be able to identify SMEs** for your groups. If this does not belong to you, would you be able to direct me to the right contact and/or if someone else also needs to be added.

Thanks,
Sukriti

for
Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Church, Ashley
Sent: August-17-18 8:40 AM
To: Barton, Meagan
Cc: Lawrie, Kirsten; MacKenzie, Julia; Good, Gaby
Subject: URGENT TASKING // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

Good morning,

s.21(1)(a)

s.21(1)(b)

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The following docket is for processing for the Minister.

Lead: AE
Input Required From: PAC (FM and Policy) FHM, SP
GCCMS #: 2018-009-00475
Routed to FM and Policy in GCCMS

Information: Please prepare a SN for a meeting with Minister Popham and Heyman taking place Friday, August 24th in Victoria. Note that the SN should cover SRKW and include the attached deck that will be used during the briefing (draft provided earlier by Department),

FM and Policy, Please provide me with your SME's, so that I can pass them onto AE. Also see email from Sarah Murdoch.

BC ones generally always go through Policy, because of cross cutting range of issues, however since Kirsten, Freya and I all away today and topics both FM. Julia will need to be looped in though

Thank you,

Ashley Church
Correspondence Officer | Agente de correspondance
Regional Director General's Office/Bureau Directeur Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Telephone | Téléphone (604) 666-3303
Ashley.Church@dfo-mpo.gc.ca

From: Murdoch, Sarah
Sent: August-17-18 8:27 AM
To: Johal, Sharan; Church, Ashley
Cc: MacKenzie, Julia; Lawrie, Kirsten
Subject: Re: **New Tasking** // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

BC ones generally always go through Policy, because of cross cutting range of issues, however since Kirsten, Freya and I all away today and topics both FM. Julia will need to be looped in though

Hope that's helpful. Off but will have my BlackBerry today

SM

Sent from my BlackBerry 10 smartphone on the Bell network.

s.21(1)(a)

s.21(1)(b)

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From: Johal, Sharan
Sent: Friday, August 17, 2018 8:17 AM
To: Church, Ashley; Murdoch, Sarah
Subject: RE: **New Tasking** // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

Sarah, given [redacted] SRKW focus... would this be best to flip to Andy and Allison. Would it help to have input coordinated through your shop as well?

Ashley is that 4pm PST or EST?

Let me know what you think!

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: Church, Ashley
Sent: August-17-18 7:36 AM
To: Murdoch, Sarah; Johal, Sharan
Subject: FW: **New Tasking** // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

As requested – Flagging to your attention. Please let me know how to proceed. AE would like to have input to them by 4PM their time.

Ashley Church
Correspondence Officer | Agente de correspondance
Regional Director General's Office/Bureau Directeur Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Telephone | Téléphone (604) 666-3303
Ashley.Church@dfo-mpo.gc.ca

From: D'Angelo, Louise-Anne
Sent: August-17-18 5:54 AM
To: Ahpiang, Melanie; Daspe, Caroline
Cc: Richter, Julie; XNCR-Grp, DMO Correspondence & Briefing Unit; Villeneuve, Anne-Marie; Butcher, Ashley; Johal, Sharan; Kaba, Kyle; Turple, Justin; Belle-Isle, Alain; Church, Ashley; SP-SADMO / BSMAP-PS (DFO/MPO); Kaleta, Michelle; Iacovitti, Michelle; Patrick, Lindsey
Subject: **New Tasking** // 2018-009-00475 // Scenario Note for the Minister - Meeting with Minister Popham and Heyman

Good morning,

Please process the following docket for the Minister:

Title: Meeting with Minister Popham and Heyman
Deliverable: Scenario Note for the Minister
Lead: AE
Input: PAC, FHM, SP

GCCMs#: 2018-009-00475

s.21(1)(a)

s.21(1)(b)

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BF in DMO: Monday, August 20, 2018

Instructions / Supplementary Information: Please prepare a SN for a meeting with Minister Popham and Heyman taking place Friday, August 24th in Victoria. Note that the SN should cover SRKW and include the attached deck that will be used during the briefing (draft provided earlier by Department), [redacted] he discussion on [redacted]

****

If you require an extension or clarification after consulting with your Group's program(s) and/or manager, please email DMO.CBUnit@dfo-mpo.gc.ca

****

Thank you!

Louise Anne D'Angelo
Receptionist/Correspondence Officer/Receptioniste/ Analyste de la correspondance
Deputy Minister's Office/Bureau du sous-ministre
Fisheries and Oceans Canada/Pêches et Océans Canada
Louise-anne.dangelo@dfo-mpo.gc.ca Tel: 993-2200

From: Butcher, Ashley
Sent: August-16-18 8:43 PM
To: XNCR-Grp, DMO Correspondence & Briefing Unit
Cc: Richter, Julie; Patrick, Lindsey; Johal, Sharan; Kaba, Kyle
Subject: New Tasking: Meeting with Minister Popham and Heyman

Hello – please assign the following in GCCMS:

Title: Meeting with Minister Popham and Heyman
Deliverable: Scenario Note for the Minister
Lead: AE
Input: PAC, FHM
BF in DMO: August 20, 2018
Instructions / Supplementary Information: Please prepare a SN for a meeting with Minister Popham and Heyman taking place Friday, August 24th in Victoria. Note that the SN should cover SRKW and include the attached deck that will be used during the briefing (draft provided earlier by Department), [redacted] The discussion on [redacted]

Thanks,

Ashley Butcher
A/DA
(613) 947-4561

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Protection and Recovery of Southern Resident Killer Whale (SRKW)

August 24, 2018

DRAFT

Canada

Pages 3120 to / à 3132

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

s.16(2)

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Dozie, Juachi

From: Harber, Lee
Sent: August-17-18 10:55 AM
To: Marshall, Christopher (EC) (christopher.marshall@canada.ca); Pelton, Jeff (jeff.pelton@tc.gc.ca); Henneman, Sonja (Sonja.Henneman@tc.gc.ca); Jones, Lisa Ann; Wong, Cecilia (EC) (cecilia.wong@canada.ca); Lafrance, Christian (christian.lafrance@tc.gc.ca); Leslie, Karen
Cc: Davis, Neil; Sanders , Michelle (michelle.sanders@tc.gc.ca); Webb, Cheryl
Subject: RE: Summary report: IMSAG - July 30
Attachments: Summary Report IMSAG - July 30.docx; IMSAG fwd agenda - proposed mtg structure .ppt

Hi everyone,

Thank you to those who have provided input.

If you haven't provided feedback yet on either the summary report or the forward agenda slides please send today as I would like to discuss finalizing them on our weekly secretariat call next Tuesday.

Also, we are looking at Oct 25 (thurs) for the next Advisory Group meeting, but will confirm next week.

Thank you

Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Harber, Lee
Sent: 2018–August-09 2:04 PM
To: Marshall, Christopher (EC) (christopher.marshall@canada.ca); Pelton, Jeff (jeff.pelton@tc.gc.ca); Henneman, Sonja (Sonja.Henneman@tc.gc.ca); Jones, Lisa Ann; Wong, Cecilia (EC) (cecilia.wong@canada.ca); Lafrance, Christian (christian.lafrance@tc.gc.ca); Leslie, Karen
Cc: Davis, Neil; Sanders , Michelle (michelle.sanders@tc.gc.ca); Webb, Cheryl
Subject: Summary report: IMSAG - July 30

Hi all,

For your review, please find attached draft summary report from the July 30 IMSAG meeting. I've been pulling this together based on everyone's notes but would appreciate a thorough review to ensure I have capture the essential points.

I've also attached the revised forward agenda deck that that outlies a proposed structure for future meetings.

Lastly, I am in discussions with DFO communications on establishing an online repository for IMSAG agenda's, reports, presentations, etc.

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Please provide feedback by COB next Thursday. We can check-in and discuss on Tuesday call as well.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

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Opening Remarks

Jonathan Wilkinson, Minister, Fisheries and Oceans Canada

- This government is committed to protection of SRKW and has made significant commitments towards activities that will address the key threats: prey availability, physical and acoustic disturbance, and contaminants.
- The federal government will be looking to this group to help inform priorities going forward and to ensure that measures in place are right ones.
- Multi-stakeholder forums are a good way for everyone to be informed and to work together on these critical issues impacting the recovery of SRKW through dialogue, meaningful discussion, good faith, and an open mind.
- Welcome that people are coming to the table to have these conversations

Catherine Blewett, Deputy Minister, Fisheries and Oceans Canada

- There was a delayed start following the SRKW Symposium, however departments are all working together to deliver on measures to address the key threats.
- Federal Departments are looking to this group for open feedback on how to best move forward on recovery measures and work towards a shared understanding of the issues.
- It means a lot to have broad representation at this forum to help advise on this issue.

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Update Presentations

1. Amended Marine Mammal Regulations

Presenter: Andy Thomson, Regional Director, Fisheries Management, DFO

- Please see PowerPoint presentation for detailed update information.

Comments from Participants:

- Support for provisions under MMR that provides exemption for vessels in transit.
- Question on whether or not there has been any enforcement of regulations to date and the official the regulations officially came into force.
- Concern about what regulations will be mean for aboriginal fishing activities e.g. if SRKW swims into fishing gear or vessels that are meant for food gathering purposes.

Information from Federal Officials:

- The regulations came into force on June 22, 2018.
- DFO is implementing a phased approach that will begin with education & compliance promotion (e.g. technical briefings, online information, etc.) that will eventually ramp up to enforcement. The intent is that over time, DFO will deliver a 30% increase in patrols over foraging areas and critical habitat for SRKW.
- The regulations will not have any impact on Aboriginal fishing right and/or activities. In regards to the vessel approach distance, this would only be enforced if you are moving towards whales, not if the whales are moving towards a vessel. However, DFO is still in the process of designing enforcement protocols that are reasonable for vessel operators.

2. Proposed new critical habitat (amended RKW Recovery Strategy)

Presenter: Cheryl Webb, Regional Director, Ecosystem Management, DFO

- Please see PowerPoint presentation for detailed update information.

Comments from Participants:

- The recreational/sport fishery sector expressed some concern and confusion around the distinction between the recent fishery closures and the new proposed critical habitat, which has led to a lack of trust. Further, they feel this is a process that should not be rushed and it is important that it is done in a way that makes sense.
- Some participants requested additional information on how the 2 new areas have been chosen versus others.
- DFO representatives informed the group that comments and concerns are being closely reviewed through the Species at Risk consultation process.

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- Question on how my comments have been received from Indigenous groups through consultation to date.

- Some participants felt that additional critical habitat needs to be established, and quickly as there is adequate scientific based evidence to support its identification and this would support a precautionary approach.

Information from Federal Officials:

- DFO is moving forward on approving the additional critical habitat within time defined by statutory requirements, however it will be important to have proper consultation and engagement.

- DFO will continue to move forward as efficiently as possible while applying the precautionary approach and adaptive management.

3. ECHO: Vessel Slowdown / Lateral Displacement trials

Presenter: Krista Trounce, Vancouver Fraser Port Authority

- Please see PowerPoint presentation for detailed update information.

Comments from Participants:

- Strong support for this initiative and recognition of the strong value in a voluntary measures.

- Companies interested in knowing results, shipping industry is engaged.

- Chamber of Shipping is pleased with participation – some companies who did not sign on became aware and participated anyway; noted time more of concern for outbound vessels; glad to see industry stepping out

- This year the slowdown has been approached in different ways in order to increase participation rate. The objective was for similar sound reduction with higher participation rate. Slowdown was implemented only when whales were present. Overall participation rate of 80% week 1 as reported by pilots; week 2 at 84% already but not complete yet.

Information from Federal Officials:

- Established traffic regulation scheme – Canada is signatory to a US agreement on traffic cooperation i.e. outbound traffic lane, lateral displacement, CCG manages this area – working with USAG, developing operational procedures, vessel traffic officers, reporting protocols. Communication products, this portion did not include BC Coast pilots

- Voluntary measures have been effective

- Transport Canada in collaboration with ECHO is aiming to begin lateral displacement of shipping lanes on August 20. This will established a traffic separation scheme in Juan de Fuca through Canada US agreement; US Coast Guard manages Canadian portions of Juan de Fuca.

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- Transport Canada is working with the USCG on passing requirements, reporting protocols and have come up with what information updates that are is available or ways of communication in multiple languages

- Information sharing through postcards distributed by Puget Sound and BC coast pilots.

4. Update on Science Activities

Presenter: Carmel Lowe, Regional Director, Science Branch, DFO

- Please see PowerPoint presentation for detailed update information.

Comments from Participants:

- Question from the Pacific Whale Watching Association regarding a study conducted by the United States National Oceanic and Atmospheric Association on digital tags used to track killer whales (Brad Hanson). There is interest in general about how Canada is collaborating with the US on activities to address key threats e.g. contaminants. Also, interest in whether NOAA shares data with Canadian counterparts and if there is agreement on science between government and industry in the US.

- Significant interest from participants in obtaining results of acoustic data that is being collected by DFO Sciences' hydrophones network. Participants are interest in having DFO share acoustic data with operators so that they are aware of how much noise they are making and how they can adjust.

- Any science monitoring of noise in closure areas? Would be very good know impact of vessel noise in closure areas.

- Concern that not enough effort is being made on prey availability and on salmon in freshwater ecosystems. Example of the Sooke net pen project and how whale watchers are supporting recovery efforts but the DFO is not contributing to these efforts.

Information from Federal Officials:

- US/CAN collaboration on all key threats work – ensure we are leveraging each other's efforts. Annual meeting between science organizations for collaboration.

- Under the MMR – no requirements to keep vessel on or turn it off.

  Focal follow – hydrophone data is collected every 3 months, will compare this data with we have observed in the fall.

  Future agenda will include a focused discussion on prey availability.

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Discussion: Terms of Reference

Section 3: Governance and Membership

Comments from Participants:

- Concerns were expressed regarding the balance of representation on the advisory group (i.e. 5 NGO members and only 1 from most other groups, such as the recreational fishing sector.

- It was raised that the group's membership should be expanded to include more representation from each sector, including having additional experts who can speak to specifics on key threats, as this would allow for more in depth discussions on some of the issues.

- Pacific Whale Watching Association noted request to have a meeting with just the whale watching sector and the government (specifically DFO). This conversation was to be taken offline.

- FN representative stated the importance of focusing on the objectives of the group and move beyond the differences between sector based interests and to look at how we can work together to help save the SRKW.

Response by federal officials:

- The membership of the group should be reflective of the objectives that the advisory group ultimately agrees upon.

- The intent of the advisory group is primarily to ensure effective information sharing across threats and to provide a forum to address any gaps or identify opportunities for collaboration and information sharing.

- If more technical discussion or information is required, the advisory group will refer to other existing committees as there are existing working groups and other technical discussion forums on SRKW activities. For example, existing threat-specific groups (e.g. ECHO) are intended to help flesh out specific measures.

- Future meetings will include presentations from both federal and non-federal representatives and could include one-time participation of individuals with technical knowledge on a particular topic of interest to the group.

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Section 5: Meeting Process (Forward Agenda)

Comments from Participants:

- Discussion was held on forward agenda for Advisory Group and what topics should be covered. There was specific interest from participants for further more in depth discussion on prey availability.

- Most participants expressed an interest in getting a better understanding on how federal activities were being advanced on each of the threats.

- Participant interest / support for more in depth discussions on: Prey availability, Salmonid Enhancement Program Activities / Hatcheries, salmon integrated harvest planning, implications for pinnipeds, acoustic data from hydrophone network, areas of collaboration between Canada and US (e.g. contaminants).

- Interest from a whale watching sector and recreational fishery sector to have bilateral discussion with federal government representatives.

  Response by federal officials:

  - Intent of the Terms of Reference is not to focus just on one threats (e.g. prey availability) but all 3 key threats including: physical and acoustic disturbance, and contaminants.

  - If the advisory group membership grows to be very large it may have an impact on the ability to have productive and focused discussions.

  - Participation should be reflective of the objectives of the advisory group.

  - Chinook recovery – existing groups that can support input on prey availability.

  - Draft forward meeting agenda template provided has been developed for your consideration.

- Funding: some participants were of the view that the terms of reference should outline a process for providing funding to support members participation.

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Closing Remarks and Next Steps

Closing Remarks

- This group is making progress towards defining the role and scope of how it will function going forward.
- The discussion on the Terms of Reference is helping inform where the urgent and priority areas will be for discussion and we will collectively bring together the right expertise and perspectives to this forum on future discussion topics.
- This advisory group will refer to and leverage existing processes when necessary recognizing that this group will only meet around 4 times per year and make the most of each meeting. Bilateral discussions will be considered where needed.
- Participants are asked to consider your role and what you can bring to this forum.
- During today's discussion, several priority topics have been identified by the group including: measures support abatement of the key threat prey availability, role of hatcheries (SEP), pinnipeds, hydrophones data, fed/prov and CAN-US collaboration on key threat contaminants,
- Requesting substantive feedback on draft Terms of Reference and forward meeting agenda (topics and meeting structure) by August 18.

Next Steps:

- Secretariat to circulate update presentations to participants (completed)
- Secretariat to Advisory Group will develop a meeting summary and circulate to participants in August.
- Participants to provide feedback on draft Terms of Reference by **August 18 to lee.harber@dfo-mpo.gc.ca.**
- Secretariat to circulate a template structure for future meetings with suggested theme/topics for discussion based on interests expressed by the group. i.e. forward agenda.
- Next Advisory Group meeting to take place in October, save the date will be sent out later in August.

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Discussion: Forward Agenda

SRKW Indigenous and Multi-Stakeholder Advisory Group
July 30, 2018

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Setting the forward agenda

- Federal departments are currently working to deliver a wide range of SRKW recovery measures; this includes measures that are being delivered in collaboration with external partners.
- In the June 22nd meeting, several key areas of interest were identified.
- We are seeking your feedback on how to integrate the areas of key interest into a forward agenda of work for this advisory group.

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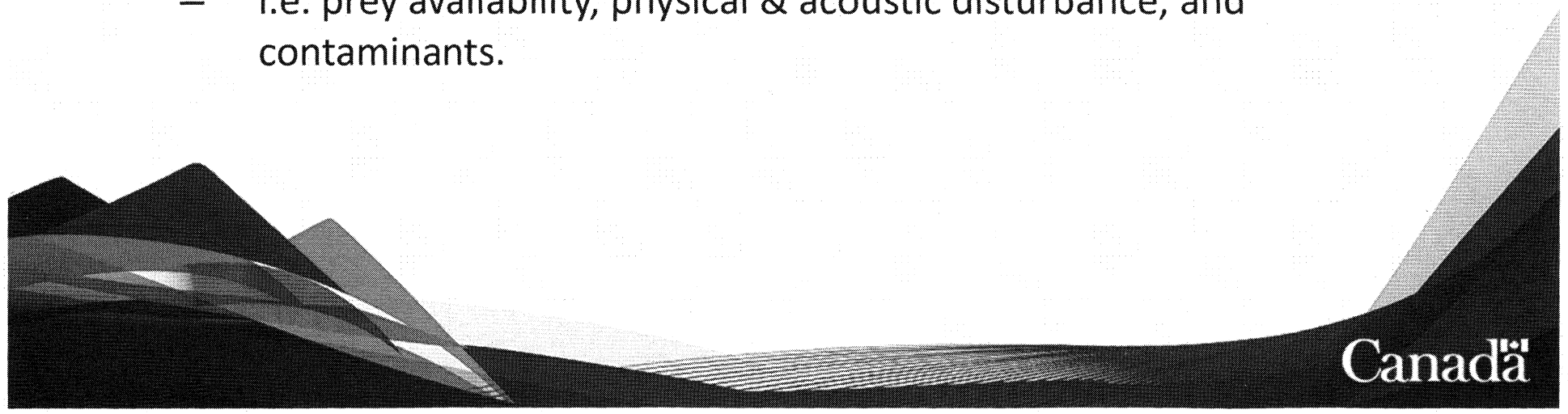
Setting the forward agenda

- DFO, TC, and ECCC are working together to support recovery of SRKW through a wide range of measures under 4 major initiatives:
  - 1) RKW Recovery Strategy & Action Plan, 2) Oceans Protection Plan, 3) Science-Based Whale Review, and 4) Whales Initiative.
- Efforts are organised around the key threats that have been identified:
  - i.e. prey availability, physical & acoustic disturbance, and contaminants.



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What we heard from you

- At the June 22 technical briefing and roundtable discussion, some key areas of interest were identified, including the importance of:
  - Ensuring compliance with recovery measures
  - Setting measurable targets (short & long-term);
  - Collaborating with Indigenous groups, the Province, and Stakeholders.

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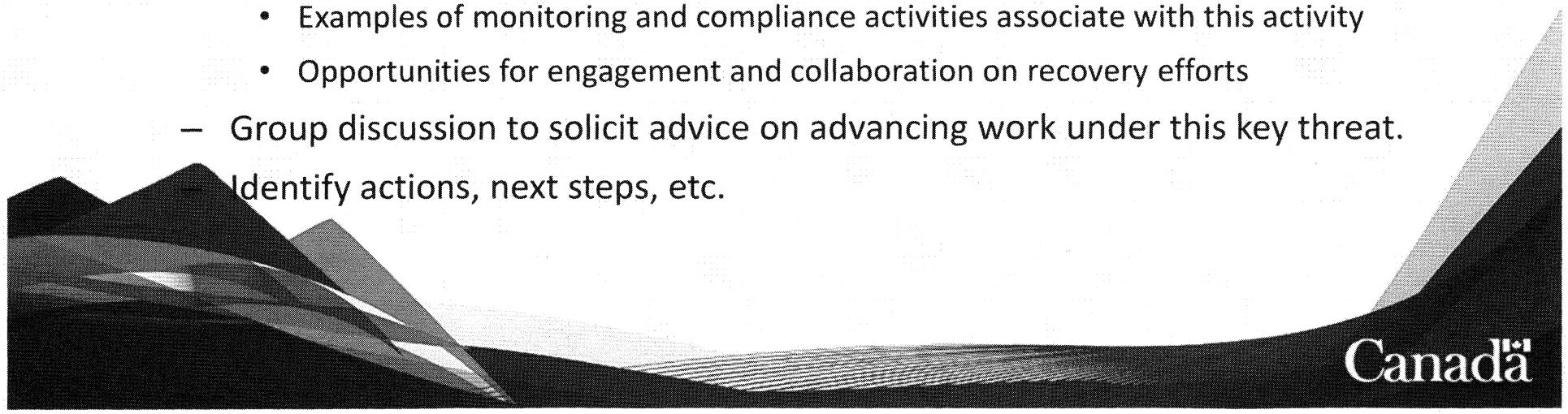
Proposed approach - Meeting Structure

- For each key threat, plan for future advisory group discussions following this general template:
  - Key updates / recent developments on the key threat (e.g. prey availability)
  - Overview presentations on priority activities supporting the abatement of the key threat (e.g. prey availability)
    - Presentations from relevant government agencies and non-government partners.
  - These presentation on priority activities could include:
    - Update on status, what's working, what is challenging, what have we learned, gaps
    - Overview of where and how measurable targets are being set (short/long-term)
    - Examples of monitoring and compliance activities associate with this activity
    - Opportunities for engagement and collaboration on recovery efforts
  - Group discussion to solicit advice on advancing work under this key threat.
  - Identify actions, next steps, etc.



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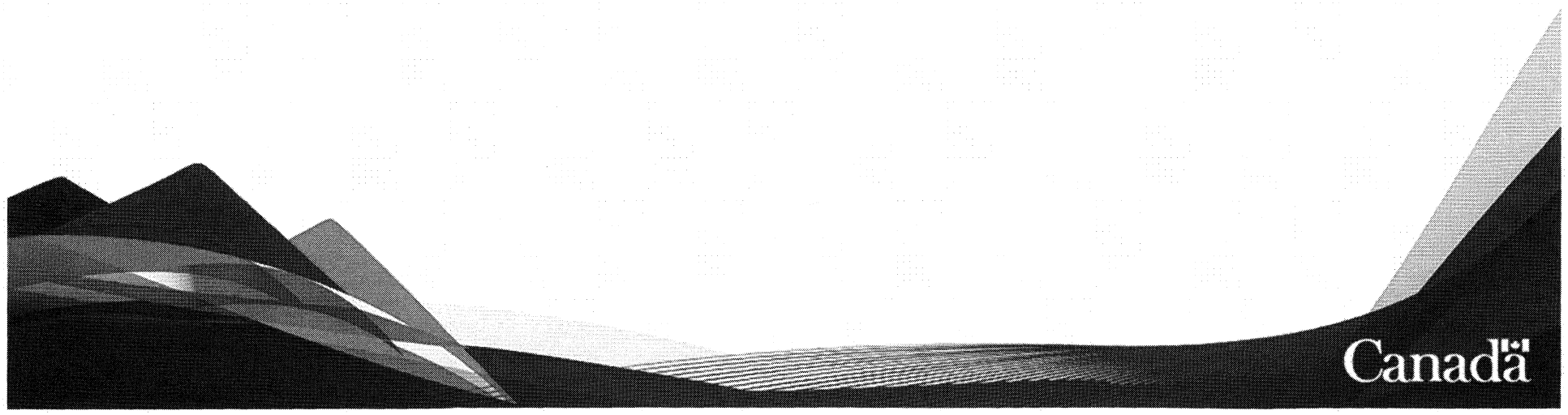
Questions

- Do you have comments or questions about this approach as a starting point for shaping future meetings with this advisory group?
- Is there interest from advisory group participants in presenting on work your organizations / sectors are involved with relating to SRKW recovery?



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Khanna, Sukriti

From: Henneman, Sonja <sonja.henneman@tc.gc.ca>
Sent: August-17-18 11:08 AM
To: Lisa Geddes; Davis, Neil
Subject: FW: Outline of presentation to BC Boating Association Annual Conference
Attachments: Outline DFO and TC presentation to Boating BC Annual Industry Conference.docx

Hi Lisa and Neil,

By way of this email, I would like to e-introduce you to each other.

Lisa - Neil is the Director of Resource Management, DFO Pacific Region.
Neil – Lisa is the Executive Director of Boating BC and is developing the program for the conference.

Neil – attached is the outline of a presentation that I prepared for Lisa. As mentioned on our call yesterday, after taking a look at what I provided, Lisa and I agreed that the presentation will focus less on such things as the lateral displacement and voluntary slowdown and more on issues of specific interest to the rec boating community. We can work out the specifics over the next few weeks, so just sending for now as an FYI. We can also work out how best to present e.g. DFO to set the context/background on SRKW, TC to speak to work we are doing on underwater noise e.g. R&D, support for quieter ship design etc., measures to address other threats, and measures that other stakeholders are taking to address underwater noise. Ultimately, we want the presentation to be dynamic and to take advantage of this premier event to both inform and to advance engagement in solutions.

A rough estimate of timing follows:

TC and DFO SRKW – Reducing Physical and Acoustic Disturbance - approximately 30 minutes
[redacted] - Sport Fishing Representative – 15-20 minutes
Qs & As – 15-30 minutes

Please note that this is a very rough sketch based on my conversation with Lisa.

Lisa - I am not sure if I have identified the sport fishing representative correctly as you mentioned "Martin", but I do not have his last name.

Neil is aware that we have agreed to a call amongst the speakers, and will participate to ensure we have a cohesive session on SRKW.

If I do not hear from you before you leave, have a wonderful vacation and we will re-connect when you return.

Sonja

Sonja Henneman
Manager, Underwater Vessel-Noise Unit / Gestionnaire, Unité du bruit sous-marin des bâtiment
Transport Canada / Transports Canada
Government of Canada / Gouvernement du Canada
sonja.henneman@tc.gc.ca / Tel: 613-991-6514 / TTY: 1-888-675-6863
Place de Ville, Tower C - 26th Floor| Tour C - 26e étage
330 rue Sparks Street, Ottawa ON K1A 0N5

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Transport Canada / Transports Canada

From: Henneman, Sonja
Sent: Monday, August 13, 2018 10:27 PM
To: Lisa Geddes [redacted]
Cc: Johnson, Jeffrey <jeffrey.johnson@tc.gc.ca>
Subject: Fw: Outline of presentation to BC Boating Association Annual Conference

Hi Lisa,

Please find attached, a high level outline of proposed presentation to BC Boating Association conference.

We are proposing a joint presentation by TC region, and a DFO representative, but will need to confirm this asap. Unfortunately, a number of people are on vacation this past week or just supremely busy given SRKW related work in the field/on the water. This is something we can work out internally, but just a head's up that it will either be a joint presentation or one representative speaking on behalf of both departments subject to confirmation that this is of interest to your members. Of course we will be cognizant of any time constraints.

Thank you for your patience,
Sonja

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Transport Canada / Department of Fisheries and Ocean

Proposal for a joint presentation at the Boating BC Association Annual General Conference

Presenters:

Jeff Pelton, BMS, GCBA
Marine Safety Inspector, Oceans Protection Plan, Transport Canada

DFO: TBD

Purpose:

The purpose of the proposed presentation is to raise awareness amongst Boating BC Association members about the Government of Canada's efforts to reduce acoustic and physical disturbance from vessels in the Salish Sea, and the important role of the recreational boating community and marine businesses in supporting recovery of the Southern Resident killer whales (SRKW).

Outline:

DFO and TC will speak to the following:

- Recently announced amendments to the *Marine Mammal Regulations* under the Fisheries Act which provide enhanced protection for marine mammals, and what this means for Boating BC members;
- Domestic and international work to reduce underwater noise from vessels. This will include, but not be limited to information on measures to reduce underwater noise in the Salish Sea (including the results of the voluntary slowdown in the Haro Strait, the lateral displacement trial in the Strait of Juan de Fuca); recent research and testing of measures to assess the effectiveness of reducing noise for all vessels operating in Canadian waters, and work at the Marine Environmental Protection Committee of the International Maritime Organization to advance quiet ship design.

Audience and Timing:

The presentation will be targeted to the Boating BC membership (ranging from small owner/operated businesses to larger, multinational companies) with a view to providing the most recent information on measures to protect the SRKW, and practical information on what the boating community can contribute as a stakeholder in the Salish Sea. As the conference takes place in November 2018, it provides a unique opportunity to report on measures put in place by the Government of Canada, and other partners over the summer of 2018, and to answer questions from the recreational boating community and marine businesses in light of e.g. amendments to the *Marine Mammal Regulations*.

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-18-18 11:44 AM
To: Ludlow, Mandy; Cormie, Mya; Jansen, Willi; Blacklock, Cam; Cauffope, Genevieve
Cc: Parker, Rhonda
Subject: Re: J-pod

Hi Guys,
As an update, SRKW are off Otter Point traveling in. Don't have ID's yet. Will keep you posted. Are you guys on water today?
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Tuesday, August 14, 2018 9:31 AM
To: Ludlow, Mandy; Cormie, Mya; Jansen, Willi; Blacklock, Cam; Cauffope, Genevieve
Cc: Parker, Rhonda
Subject: J-pod

Hi All,
Just wanted to give an update on J-pod. They were last seen off Port Renfrew yesterday afternoon by Strait watch. Likely will be hanging out off Swiftsure somewhere today. NOAA is off the water until Thursday. Strait Watch and Sound watch will be on the water today.
Best,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Cottrell, Paul
Sent: Monday, August 13, 2018 10:53 AM
To: Ludlow, Mandy; Cormie, Mya; Jansen, Willi; Blacklock, Cam; Cauffope, Genevieve

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Cc: Parker, Rhonda
Subject: Re: Notification: Confirmed Entangled Humpback, 8/12/2018 Cape Flattery, WA

CP is not to lead a disentanglement. Currently I am the only one authorized in the Pacific to lead a rescue. But if you have the training to attach a sat tag CP can attach a sat tag after consultation with me. We only have a limited number of sat tags. So it has been difficult determining where to locate them. We have gone with where the most entanglements have occurred. If this animal is re sighted in Canadian waters, I can get to Victoria in a couple hours. I have a sat tag which I will bring with me.
Cheers,
Paul
Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Ludlow, Mandy
Sent: Monday, August 13, 2018 10:16 AM
To: Cottrell, Paul; Cormie, Mya; Jansen, Willi; Blacklock, Cam; Cauffope, Genevieve
Cc: Parker, Rhonda
Subject: RE: Notification: Confirmed Entangled Humpback, 8/12/2018 Cape Flattery, WA

Paul/Gen/Linda,

GBS needs a sat tag and grappler or two if possible. Both Jordan and I have the training and I would really like to get the rest of my staff the sat tag training asap. This is best option we have to help these animals. **I have read the new policy indicating that we should not be the lead in sat tag installation, however, I have to ask, are we allowed to affix one to an animal if you weren't there? (Linda the underlined question is for you)**

FYI Mya/Cam, [redacted]

Please let me know, when and if we can purchase one,

Thanks,
M

From: Cottrell, Paul
Sent: Sunday, August 12, 2018 8:12 PM
To: Ludlow, Mandy <Mandy.Ludlow@dfo-mpo.gc.ca>; Cormie, Mya <Mya.Cormie@dfo-mpo.gc.ca>; Jansen, Willi <Willi.Jansen@dfo-mpo.gc.ca>; Blacklock, Cam <Cam.Blacklock@dfo-mpo.gc.ca>
Subject: Fw: Notification: Confirmed Entangled Humpback, 8/12/2018 Cape Flattery, WA

Hi Guys,
A heads up about an entangled humpback. We will have to keep a look out. I'll let you know if I hear anything.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Kristin Wilkinson - NOAA Federal [redacted]
Sent: Sunday, August 12, 2018 2:54 PM
To: Ayres, Daniel L (DFW); Jeffries, Steven (DFW); Cottrell, Paul; nmfs.mmhsrp.hq; Ed Lyman; Carol Bernthal - NOAA Federal; Jenny Waddell - NOAA Federal; Doug Sandilands; John Calambokidis; Jenn Tackaberry; Jonathan Scordino;

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s.19(1)

[redacted] Barbara Lagerquist
Cc: Lynne Barre; Lauren Saez - NOAA Affiliate; Michael Milstein - NOAA Federal; Dan Lawson; Justin Viezbicke - NOAA Federal; Justin Greenman - NOAA Federal; Barry Thom - NOAA Federal; Scott Rumsey - NOAA Federal; Ruth Howell; Donna Darm; Steve Stone - NOAA Federal; Chris McNulty - NOAA Federal; Greg Busch
Subject: Notification: Confirmed Entangled Humpback, 8/12/2018 Cape Flattery, WA

Hi Again,

This is notification of a live confirmed Humpback whale just north of Cape Flattery, WA (48 26.222 N, 124 44.534W). The whale is entangled in tribal gill net and is currently towing the cork line (see attached photo, please do not distribute).

This was reported by a Makah tribal fisherman to [redacted] the Makah marine mammal biologist. Unfortunately, the reporting party did not stay on scene and left the entangled whale. [redacted] has been on the water for the past 3 hours searching for the whale along with an OSU research crew. [redacted] with SR3 is also en route to attempt disentanglement if the whale is relocated.

This is the 16th case in WA/OR in 2018. We have now had 3 live cases in two days.

Kristin

On Sun, Aug 12, 2018 at 2:46 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:

> Hi All -
>
> This is notification of a live confirmed Humpback whale entanglement on the evening of Saturday, August 11th in an active Makah gill net fishery north of Seiku, WA. The tribal fisherman was on scene and the whale was very aggravated. Unfortunately, the whale died overnight and is currently fully submerged in the net. The net has now sunk and cannot be recovered until the whale starts to decompose which may or may not bring it to the surface.
>
> This is the 15th entanglement case in Washington/Oregon in 2018.
>
> Kristin
>
> On Mon, Aug 6, 2018 at 5:12 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:
>
> > Hello All,
> >
> > This is notification of a confirmed entangled Humpback whale off Grayland, WA. The animal is dead and shows an orange buoy near the peduncle. This animal was sighted by the USCG during a training flight earlier today. The position of the sighting was 46-48.765N/ 124-08.633W.
> >
> > Three photographs are attached here, please do not share them outside of this email chain.
> >
> > Cascadia Research Collective and SR3 have been notified. If the animal comes ashore we will make plans for a necropsy and SR3 may consider a response to document the entanglement.
> >
> > [redacted] is the primary point of contact for this case since all of my time and energy is coordinating the field teams and response to J50.
> >
> > If you have any questions about this case please feel free to get in touch with [redacted]
> >
> > This is entanglement #13.

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Thanks everyone,

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

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Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

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Dozie, Juachi

From: Brekke, Heather
Sent: August-29-18 10:59 AM
To: Jones, Lisa Ann
Subject: 4 copies of each please
Attachments:

For the ppt, please print off 2 copies with the 2 slides per page

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

Pages 3156 to / à 3172

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69(1)(g) re: (e), 69(1)(g) re: (a)

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-20-18 6:43 AM
To: Cottrell, Paul; Harber, Lee
Subject: FW: Lab findings and treatment priorities
Attachments: image009.png; image012.png; image010.png; image011.png; August 17.docx

Good morning Paul and Lee,

I will provide mino with an update by end of day in Ottawa about SRKW. If you could provide any comments or updates regarding J50, J35, J-pod and treatment operations by noon Pacific time that would be great.

Specifically, regarding the lab findings of parasites, has NOAA submitted a request to update their permit to administer parasite treatment?

Thanks,

Kendra

-----Original Message-----
From: Cottrell, Paul
Sent: August-18-18 12:19 PM
To: Moore, Kendra
Subject: Fw: Lab findings and treatment priorities

Hi Kendra,
Fyi, have a great weekend!
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Saturday, August 18, 2018 9:03 AM
To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Kennedy, Eddy; Lowe, Carmel; Sloan, Lara; Thornton, Sheila; Harber, Lee; Webb, Cheryl; Cauffope, Genevieve
Subject: Fw: Lab findings and treatment priorities

Hi All,
Fyi, some information and analysis from the veterinarian team on the parasite found in the recent collected fecal sample from J-pod. Dr Raverty from the Abottsford animal health Centre has been instrumental in review/evaluation. Louise it may be worth working with Mike (NOAA comms) and Dr Raverty to ensure our comms materials are consistent. Let me know how I can help.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message

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From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: Friday, August 17, 2018 5:39 PM
To: Cottrell, Paul
Subject: Fw: Lab findings and treatment priorities

From: Raverty, Stephen AGRI:EX
Sent: Friday, August 17, 2018 5:27:06 PM
To: Michael Milstein - NOAA Federal
Cc: Jim Milbury; Ruth Howell - NOAA Federal; Raverty, Stephen AGRI:EX
Subject: Re: Lab findings and treatment priorities

hi Michael,

the paragraph reads well and is fine as is, but i have added a few edits by track changes in the attached word document that may be more accurate, you are welcome to consider them as needed.

At present both the antibiotic and parasite treatments can be administered by dart or pole syringe, but not necessarily at the same time, so there may be to be some consideration given as to which treatment is the priority. Most likely the antibiotic, but this may still be under review.

cheers

Stephen

From: Michael Milstein - NOAA Federal <[redacted]>
Sent: Friday, August 17, 2018 3:51 PM
To: Raverty, Stephen AGRI:EX
Cc: Jim Milbury; Ruth Howell - NOAA Federal
Subject: Re: Lab findings and treatment priorities

Stephen,

Thank you so much for this background and explanation. It's very helpful to us in understanding how to explain the findings to the public.

Can you tell me if the following reads accurately to you?

August 17: Results are starting to come in from several top laboratories around the country that are supporting the J50/Scarlet response. First, a fecal sample collected last weekend from a group of three J Pod whales (J16/Slick, J42/Echo, and J50/Scarlet), showed high levels of Contracaecum, a nematode parasite that is commonly found in killer whales and other marine mammals. (In a healthy marine mammal, presence of this nematode is not usually a problem.

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In animals that are emaciated or otherwise compromised, however, the nematode can burrow through the stomach lining introducing infection to the bloodstream, or it can bore into the internal organs and cause damage and pathology.) While we cannot be sure the sample came from J50/Scarlet, the veterinary team has updated her treatment priorities to include antibiotics and a dewormer. Both have proved successful and safe in other cetaceans. The treatment will help J50/Scarlet by reducing burdens on her system and help her to start regaining the weight she has lost. The whales remain in open waters off the west side of Vancouver Island, beyond the reach of the response teams.

Thank you again for your willingness to help us communicate this to the public.

Best wishes,
Michael

On Fri, Aug 17, 2018 at 12:12 PM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca<mailto:Stephen.Raverty@gov.bc.ca>> wrote:
Hi Michael,
Thank you for the note below. It is important to appreciate that these parasites are widespread within the population of killer whales and other marine mammal species (cetaceans and pinnipeds) and it is not unusual to identify them on post mortem exam of animals that may die of conditions unrelated to parasitism (ship strike, HABs etc). As these whales prey share and eat the same fish species, it is likely that they have all been exposed and are infected with varying worm burdens.

Typically the parasites may lie over or migrate through the folds of the stomach lining or may be interspersed within the contents of the small and large intestinal track. However, in stranded animals that present with evidence of debilitation or feature other more chronic disease processes, in the nonglandular compartment (of the stomach) the parasites (Contracaecum) may burrow through the lining of stomach, resulting in a nodular proliferations and scar formation in the wall of the stomach. We try to gauge the number of these nodules, the size of any associated ulcers, and number and depth of worms penetrating within the stomach ulcers and digestive track, in context of the overall health of an individual animal. An animal that is in good body condition and able to successfully forage can have large numbers of worms present with no evidence of systemic or clinical disease; whereas, an animal that may have other health issues (including emaciation) may have smaller numbers of worms that can result in more significant tissue injury or pathology. The stomach ulcers can be a concern and some of the consequences of these lesions may include introduction of stomach or intestinal bacteria into the blood stream with secondary septicemia or in more extreme circumstances, perforation of the wall with secondary peritonitis. Some worms can migrate through the lining of the stomach or intestine and travel along the surface or through the internal organs with some associated pathology.

In the fecal sample collected in the vicinity of J16, 42 and 50, moderate numbers of eggs were identified by fecal floatation. The actual numbers of worms in the digestive track and associated pathology cannot be inferred from this finding alone and inadvertent treatment of J16, J42 or another whale within the pod should not have an adverse impact. The parasite treatment and antibiotic have proved successful and safe in other cetacean species.

Please let me know if this helps, would be pleased to call early afternoon should you need any clarification or other details. If needed, you can share your questions with the vet group to see if there may be a consensus of clinical and pathologic interpretations.

Kindest regards,
Stephen

s.19(1)

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From: Michael Milstein - NOAA Federal [mailto:[redacted]
Sent: Friday, August 17, 2018 11:20 AM
To: Raverty, Stephen AGRI:EX
Cc: Kristin Wilkinson - NOAA Affiliate; Jim Milbury; Ruth Howell - NOAA Federal
Subject: Lab findings and treatment priorities

Hello Stephen,

I hope you are doing well. It has been good to hear your voice on the debrief calls over the last few weeks.

I wanted to let you know that we (the communications team) are planning to begin sharing the lab results for J50 as they come in. We will of course do so only after the veterinary team has considered the results and the treatment priorities. Please let us know if you have any concerns.

One question I have is, how does Contracaecum affect the animal? As we strive to translate the findings for the public, we would like to help them understand what this finding tells us about J50's condition, and how we plan to respond to that. Is there any concern about the treatment affecting another animal if the fecal sample turns out to be from a different animal than J50?

Thank you for all your hard work on this response.

Best,
Michael

--

Michael Milstein

Public Affairs Officer

NOAA Fisheries

West Coast Region<http://www.westcoast.fisheries.noaa.gov/>, Northwest Fisheries Science Center<http://www.nwfsc.noaa.gov/>, Southwest Fisheries Science Center<https://swfsc.noaa.gov/>

Office: 503-231-6268

Cell: [redacted]

[redacted]

[https://lh3.googleusercontent.com/H6MnkdnMfv4eUX0GhR2-SN83dAP1RxN0N_SRDwm95o_X2Vfwry9KuzzziZ3CFj3ZzJpcntkUS2ydNqWe9FyIscKNakMZMDENWjC07X5ao37H1iV51awX6yiU3oU]

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Michael Milstein

Public Affairs Officer

NOAA Fisheries

West Coast Region<http://www.westcoast.fisheries.noaa.gov/>, Northwest Fisheries Science Center<http://www.nwfsc.noaa.gov/>, Southwest Fisheries Science Center<https://swfsc.noaa.gov/>

Office: 503-231-6268

Cell: [redacted]

[redacted]

[https://lh3.googleusercontent.com/H6MnkdnMfv4eUX0GhR2-SN83dAP1RxN0N_SRDwm95o_X2Vfwry9KuzzziZ3CFj3ZzJpcntkUS2ydNqWe9FyIscKNakMZMDENWjC07X5ao37H1iV51awX6yiU3oU]

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Khanna, Sukriti

From: Lowe, Carmel
Sent: August-20-18 5:12 PM
To: Cottrell, Paul; Davis, Neil
Cc: Thomson, Andrew; Kennedy, Eddy; MacDougall, Lesley; Christensen, Lisa
Subject: RE: Lab findings and treatment priorities

Ok thanks.

Carmel
Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7 Carmel.Lowe@dfo-mpo.gc.ca Telephone | Téléphone 250-756-7177 Facsimile | Télécopieur 250-729-8360 Government of Canada | Gouvernement du Canada

-----Original Message-----
From: Cottrell, Paul
Sent: August 20, 2018 5:07 PM
To: Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Kennedy, Eddy <Eddy.Kennedy@dfo-mpo.gc.ca>; MacDougall, Lesley <Lesley.MacDougall@dfo-mpo.gc.ca>; Christensen, Lisa <Lisa.Christensen@dfo-mpo.gc.ca>
Subject: Re: Lab findings and treatment priorities

Hi Carmel,
Waiting for the proposal/application from NOAA. Will send it along as soon as we receive.
Thanks so much,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Lowe, Carmel
Sent: Monday, August 20, 2018 4:49 PM
To: Davis, Neil
Cc: Cottrell, Paul; Thomson, Andrew; Kennedy, Eddy; MacDougall, Lesley; Christensen, Lisa
Subject: RE: Lab findings and treatment priorities

Ok - looping CSAP folks in here as this is the designated window for clients to submit requests for science advice .... can you send us a copy of the NOAA proposal?

Carmel
Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7 Carmel.Lowe@dfo-mpo.gc.ca Telephone | Téléphone 250-756-7177 Facsimile | Télécopieur 250-729-8360 Government of Canada | Gouvernement du Canada

s.21(1)(a)
s.21(1)(b)
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-----Original Message-----
From: Davis, Neil
Sent: August 20, 2018 4:34 PM
To: Kennedy, Eddy <Eddy.Kennedy@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Cc: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: FW: Lab findings and treatment priorities

[redacted]

-----Original Message-----
From: Cottrell, Paul
Sent: Monday, August 20, 2018 10:14 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: RE: Lab findings and treatment priorities

Hi Neil,

[redacted]

Paul

-----Original Message-----
From: Davis, Neil
Sent: August-20-18 10:02 AM
To: Cottrell, Paul
Subject: FW: Lab findings and treatment priorities

[redacted]

-----Original Message-----
From: Jenkins, Randy
Sent: Monday, August 20, 2018 9:56 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>
Subject: RE: Lab findings and treatment priorities

[redacted]

Authorization to include deworming medications?

-----Original Message-----

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From: Davis, Neil
Sent: Monday, August 20, 2018 12:45 PM
To: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>
Subject: FW: Lab findings and treatment priorities

Fyi. Vet assessment summary is outlined below.

-----Original Message-----
From: Girouard, Louise
Sent: Sunday, August 19, 2018 11:56 AM
To: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Kennedy, Eddy <Eddy.Kennedy@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Cauffope, Genevieve <Genevieve.Cauffope@dfo-mpo.gc.ca>
Subject: Re: Lab findings and treatment priorities

Thanks Paul.
My BB was playing games this morning. NOAA has been tweeting out the information and we are retweeting.

Here is one of the atricles:
https://www.cbc.ca/news/canada/british-columbia/researchers-lead-cause-distressed-killer-whale-j-50-illness-1.4790442

L

Original Message
From: Cottrell, Paul
Sent: Saturday, August 18, 2018 9:03 AM
To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Kennedy, Eddy; Lowe, Carmel; Sloan, Lara; Thornton, Sheila; Harber, Lee; Webb, Cheryl; Cauffope, Genevieve
Subject: Fw: Lab findings and treatment priorities

Hi All,
Fyi, some information and analysis from the veterinarian team on the parasite found in the recent collected fecal sample from J-pod. Dr Raverty from the Abottsford animal health Centre has been instrumental in review/evaluation. Louise it may be worth working with Mike (NOAA comms) and Dr Raverty to ensure our comms materials are consistent. Let me know how I can help.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: Friday, August 17, 2018 5:39 PM
To: Cottrell, Paul
Subject: Fw: Lab findings and treatment priorities

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From: Raverty, Stephen AGRI:EX
Sent: Friday, August 17, 2018 5:27:06 PM
To: Michael Milstein - NOAA Federal
Cc: Jim Milbury; Ruth Howell - NOAA Federal; Raverty, Stephen AGRI:EX
Subject: Re: Lab findings and treatment priorities

hi Michael,

the paragraph reads well and is fine as is, but i have added a few edits by track changes in the attached word document that may be more accurate, you are welcome to consider them as needed.

At present both the antibiotic and parasite treatments can be administered by dart or pole syringe, but not necessarily at the same time, so there may be to be some consideration given as to which treatment is the priority. Most likely the antibiotic, but this may still be under review.

cheers

Stephen

From: Michael Milstein - NOAA Federa
Sent: Friday, August 17, 2018 3:51 PM
To: Raverty, Stephen AGRI:EX
Cc: Jim Milbury; Ruth Howell - NOAA Federal
Subject: Re: Lab findings and treatment priorities

Stephen,

Thank you so much for this background and explanation. It's very helpful to us in understanding how to explain the findings to the public.

Can you tell me if the following reads accurately to you?

August 17: Results are starting to come in from several top laboratories around the country that are supporting the J50/Scarlet response. First, a fecal sample collected last weekend from a group of three J Pod whales (J16/Slick, J42/Echo, and J50/Scarlet), showed high levels of Contracaecum, a nematode parasite that is commonly found in killer whales and other marine mammals. (In a healthy marine mammal, presence of this nematode is not usually a problem. In animals that are emaciated or otherwise compromised, however, the nematode can burrow through the stomach lining introducing infection to the bloodstream, or it can bore into the internal organs and cause damage and pathology.) While we cannot be sure the sample came from J50/Scarlet, the veterinary team has updated her treatment priorities to include antibiotics and a dewormer. Both have proved successful and safe in other cetaceans. The treatment will help J50/Scarlet by reducing burdens on her system and help her to start regaining the weight she has lost. The whales remain in open waters off the west side of Vancouver Island, beyond the reach of the response teams.

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Thank you again for your willingness to help us communicate this to the public.

Best wishes,
Michael

On Fri, Aug 17, 2018 at 12:12 PM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca<mailto:Stephen.Raverty@gov.bc.ca>> wrote:
Hi Michael,
Thank you for the note below. It is important to appreciate that these parasites are widespread within the population of killer whales and other marine mammal species (cetaceans and pinnipeds) and it is not unusual to identify them on post mortem exam of animals that may die of conditions unrelated to parasitism (ship strike, HABs etc). As these whales prey share and eat the same fish species, it is likely that they have all been exposed and are infected with varying worm burdens.

Typically the parasites may lie over or migrate through the folds of the stomach lining or may be interspersed within the contents of the small and large intestinal track. However, in stranded animals that present with evidence of debilitation or feature other more chronic disease processes, in the nonglandular compartment (of the stomach) the parasites (Contracaecum) may burrow through the lining of stomach, resulting in a nodular proliferations and scar formation in the wall of the stomach. We try to gauge the number of these nodules, the size of any associated ulcers, and number and depth of worms penetrating within the stomach ulcers and digestive track, in context of the overall health of an individual animal. An animal that is in good body condition and able to successfully forage can have large numbers of worms present with no evidence of systemic or clinical disease; whereas, an animal that may have other health issues (including emaciation) may have smaller numbers of worms that can result in more significant tissue injury or pathology. The stomach ulcers can be a concern and some of the consequences of these lesions may include introduction of stomach or intestinal bacteria into the blood stream with secondary septicemia or in more extreme circumstances, perforation of the wall with secondary peritonitis. Some worms can migrate through the lining of the stomach or intestine and travel along the surface or through the internal organs with some associated pathology.

In the fecal sample collected in the vicinity of J16, 42 and 50, moderate numbers of eggs were identified by fecal floatation. The actual numbers of worms in the digestive track and associated pathology cannot be inferred from this finding alone and inadvertent treatment of J16, J42 or another whale within the pod should not have an adverse impact. The parasite treatment and antibiotic have proved successful and safe in other cetacean species.

Please let me know if this helps, would be pleased to call early afternoon should you need any clarification or other details. If needed, you can share your questions with the vet group to see if there may be a consensus of clinical and pathologic interpretations.

Kindest regards,
Stephen

From: Michael Milstein - NOAA Federal [mailto
Sent: Friday, August 17, 2018 11:20 AM
To: Raverty, Stephen AGRI:EX

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Cc: Kristin Wilkinson - NOAA Affiliate; Jim Milbury; Ruth Howell - NOAA Federal
Subject: Lab findings and treatment priorities

Hello Stephen,

I hope you are doing well. It has been good to hear your voice on the debrief calls over the last few weeks.

I wanted to let you know that we (the communications team) are planning to begin sharing the lab results for J50 as they come in. We will of course do so only after the veterinary team has considered the results and the treatment priorities. Please let us know if you have any concerns.

One question I have is, how does Contracaecum affect the animal? As we strive to translate the findings for the public, we would like to help them understand what this finding tells us about J50's condition, and how we plan to respond to that. Is there any concern about the treatment affecting another animal if the fecal sample turns out to be from a different animal than J50?

Thank you for all your hard work on this response.

Best,
Michael

--

Michael Milstein

Public Affairs Officer

NOAA Fisheries

West Coast Region<http://www.westcoast.fisheries.noaa.gov/>, Northwest Fisheries Science Center<http://www.nwfsc.noaa.gov/>, Southwest Fisheries Science Center<https://swfsc.noaa.gov/>

Office: 503-231-6268

Cell [redacted]

[redacted]

[https://lh3.googleusercontent.com/H6MnkdnMfv4eUX0GhR2-SN83dAP1RxN0N_SRDwm95o_X2Vfwry9KuzzziZ3CFj3ZzJpcntkUS2ydNqWe9FyIscKNakMZMDENWjC07X5ao37H1iV51awX6yiU3oU]

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[https://lh3.googleusercontent.com/4yVfEmp-i1SBxk1-TjaG1_qDe_IuSdUajtgFVba2kGUL-1d8uq-srvHlxLqJQ3q2XuRo3C1t2HRQrdDLTBccbnkwYwvEkD5aLinJgM4aaJ-i_Vf9X9ih7MWD_AiWnxr4vg]<http://www.facebook.com/usnoaafisheriesgov>[https://lh3.googleusercontent.com/aeD-0KUoUyvTw3_IFv-6F0oxYDZQuEeKnlObZDkq2ETA7c5eBnUvzcDHcshO593hrM8XQKcdU25Zo9YjD6FbUSu5kRP2zOcxU4OSkpb2k5Yvxizx_-q7LDEt6hn2NGRUBg]<http://www.twitter.com/noaafisheries>[https://lh3.googleusercontent.com/rRFj-N4-WBZhmlLH5eLfyq6E0V_E8XNGkJkOvglgpSLv-6f4jVu6f4SGE3KHXj56KNz-ZqfBEyxatjAjlWiWdPY3l16gBmtl1XDxutKeprUjB9bvmNkaBZ8jvWAUo4iaSg]<http://www.youtube.com/usnoaafisheriesgov>

--

Michael Milstein

Public Affairs Officer

NOAA Fisheries

West Coast Region<http://www.westcoast.fisheries.noaa.gov/>, Northwest Fisheries Science Center<http://www.nwfsc.noaa.gov/>, Southwest Fisheries Science Center<https://swfsc.noaa.gov/>

Office: 503-231-6268

Cell: [redacted]

[redacted]

[https://lh3.googleusercontent.com/H6MnkdnMfv4eUX0GhR2-SN83dAP1RxN0N_SRDwm95o_X2Vfwry9KuzzziZ3CFj3ZzJpcntkUS2ydNqWe9FyIscKNakMZMDENWjC07X5ao37H1iV51awX6yiU3oU]

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[https://lh3.googleusercontent.com/4yVfEmp-i1SBxk1-TjaG1_qDe_IuSdUajtgFVba2kGUL-1d8uq-srvHlxLqJQ3q2XuRo3C1t2HRQrdDLTBccbnkwYwvEkD5aLinJgM4aaJ-i_Vf9X9ih7MWD_AiWnxr4vg]<http://www.facebook.com/usnoaafisheriesgov>[https://lh3.googleusercontent.com/aeD-0KUoUyvTw3_IFv-6F0oxYDZQuEeKnlObZDkq2ETA7c5eBnUvzcDHcshO593hrM8XQKcdU25Zo9YjD6FbUSu5kRP2zOcxU4OSkpb2k5Yvxizx_-q7LDEt6hn2NGRUBg]<http://www.twitter.com/noaafisheries>[https://lh3.googleusercontent.com/rRFj-N4-WBZhmlLH5eLfyq6E0V_E8XNGkJkOvglgpSLv-6f4jVu6f4SGE3KHXj56KNz-

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ZqfBEyxatjAjlWiWdPY3l16gBmtl1XDxutKeprUjB9bvmNkaBZ8jvWAUo4iaSg]<http://www.youtube.com/usnoaafisheriesgov>

s.19(1)

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Khanna, Sukriti

From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: August-20-18 1:14 PM
To: Cottrell, Paul
Subject: FW: MEHDS Updated Results - J50
Attachments: MEHDS Preliminary Report 3 - J50 August 2018.pdf

Paul,
Are you able to make the call this Thurs at 10:00? Will send out discussion points
S

From: [redacted] **On Behalf Of** Tracey Goldstein
Sent: Monday, August 20, 2018 10:57 AM
To: Raverty, Stephen AGRI:EX
Cc: Joseph Karl Gaydos; Brad Hanson - NOAA Federal; Kristin Wilkinson - NOAA Federal; Hendrik Nollens
Subject: Re: MEHDS Updated Results - J50

Dear All,

Please find attached updated microbiology results for the sample from J50 -final results are still pending. Please note *Photobacterium damselae* has been renamed and was previously known as *Vibrio damselae and Pasteurella damselae.*

Best, Tracey

Photobacterium damselae subsp. *piscicida* (formerly *Pasteurella piscicida*)

On Fri, Aug 17, 2018 at 6:53 PM, Tracey Goldstein <[redacted] wrote:
Dear All,

Please find attached updated microbiology results for the sample from J50 - will send final results next week.

Best, Tracey

On Thu, Aug 16, 2018 at 8:31 PM, Tracey Goldstein <[redacted] wrote:
Dear All,

Please find attached preliminary microbiology results for the sample from J50 - will send additional results when we have them.

Best, Tracey

On Wed, Aug 15, 2018 at 7:58 PM, Tracey Goldstein <[redacted] wrote:
Hi All,

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Please find attached the parasitology report for J-50. The fungal and bacterial cultures have been started.

We will run Brucella PCR on the swab sample next week.

Best, Tracey

On Wed, Aug 15, 2018 at 3:03 PM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

Tracey

The fungal culture and aerobic culture would be the priority, and if there is sufficient feces the dfa may be of interest, but not necessary. If you are able to run pcr for Brucella, that would be of particular value (A73 had titers over 150,000). Will know for the future to submit more volume of feces for you.

Sorry and thank you.

Step

From: [redacted] **On Behalf Of** Tracey Goldstein
Sent: Wednesday, August 15, 2018 2:12 PM
To: Joseph Karl Gaydos
Cc: Raverty, Stephen AGRI:EX; Hendrik Nollens

Subject: Re: J50 4 year old kw fecal submission to arrive tomorrow, Aug 15, 2018

Hi All,

The sample is only 300ul so we can't do everything you are asking with that volume.

We are starting with bacterial culture and fecal panel, maybe can do a smear to look for parasites by light microscopy but not enough for a fecal float, can try to do DFA for Giardia and Crypto if there is enough and if any left over they can try fungal culture.

If you have more sample to ship that would be good.

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Best, Tracey

On Wed, Aug 15, 2018 at 1:41 PM, Tracey Goldstein <[redacted] wrote:

Samples arrived safely, T

On Tue, Aug 14, 2018 at 3:43 PM, Joseph Karl Gaydos <[redacted] wrote:

Thank you Steve and than you Tracey.

Please bill to me and tell Lori it should be billed agains the NOAA KW Stranding Contract.

Best,

JOE

Joseph K. Gaydos
360-376-3910
[redacted]
www.seadocsociety.org

On Aug 14, 2018, at 11:37 AM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

Hi Tracey,

Would you please run aerobic and anaerobic culture, the extended enteric fecal culture, fungal culture and id (in case there are yeast), and parasitology (floatation and sedimentation). IF there are protozoa detected by parasitology, we could potentially request pcr for cryptosporidium and giardia, but will away the parasit results.

Thank you

Stephen

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From: [redacted] **On Behalf Of** Tracey Goldstein
Sent: Tuesday, August 14, 2018 11:27 AM
To: Raverty, Stephen AGRI:EX
Cc: Nollens, Hendrik; Joseph K. Gaydos; Kristin Wilkinson - NOAA Federal
Subject: Re: J50 4 year old kw fecal submission to arrive tomorrow, Aug 15, 2018

Thanks Stephen.

So to be clear we are submitting the sample for aerobic and anaerobic bacterial culture, and for fecal float for parasite ID?

Thankst Tracey

On Tue, Aug 14, 2018 at 9:40 AM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

Tracey

An emaciated 4 year old female kw J50 in the Salish Sea that has been closely monitored for the last couple of weeks and a 20 ml fecal sample was opportunistically recovered when the mom, brother and J50 swam near a research boat Sunday evening. A subsample of the feces believed to be from 1 of the 3 animals will couriered to your lab from SeaWorld today and should arrive tomorrow morning (genetics is currently underway to confirm the animal id).

Could you please screen the sample for enteric bacterial pathogens, fungal culture, and parasitology. If indicated, pcr for select pathogens may be considered, but could you please let Hendrik, Joe and I know.

As always, thank you for your help in working up these challenging cases. ☺

Stephen

--
Tracey Goldstein, PhD
One Health Institute
School of Veterinary Medicine
University of California
Davis, CA 95616
Phone: (530) 752-0412
Fax: (530) 752-3318
E-mail: t[redacted]

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ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616-8734

20 August 2018

UC Davis Marine Ecosystem Health Diagnostic & Surveillance Laboratory

Client: Dr. Joe Gaydos, SeaDoc Society, UC Davis Wildlife Health Center

Preliminary Bacterial and Fungal culture Results 3 for J50 (this report supercedes all previous results):

Veterinary Medical Teaching Hospital
University of California, Davis

20Aug18 at 9:55am.

Microbiology 18M06997 Preliminary Report

Patient#: **Tag#:** X0mhl1(J50) **Breed:** OSA-KILLER WHALE **Sex:** F **Color:** **Birth:**	**Client#:** X0MHL1 **Client:** VM Whc Marine Ecohealth Lab **Address:** Tracy Goldstein Research **City, St:** Davis, CA 95616 **Home Phone:** 530 752 3859 **Other Phone:** 530 752 3859 530 752 3318FAX
Request#: 18M06997 **Requested:** 16Aug18 **Comment:** FECES. PLEASE FAX REPORTS TO 752-3318	**Visit#:** 516264M **Clinician:** No Doctor # **Tech:** **Location:**

Procedures Requested:

8019	Sea otter fecal protocol
8011	Diagnostic bacteriology, aerobic, marine
8039	Fungal Identification

Specimen #1	
Specimen	FECES
Collection Method	UNKNOWN
Comment	
Organisms	CULTURE: LARGE NUMBERS PHOTOBACTERIUM DAMSELAE (ID'd by MALDI-TOF). CULTURE: MODERATE NUMBERS E. COLI (ID'd by MALDI-TOF). NO SALMONELLA SP. CULTURED. NO STREPT. BOVIS/EQUINUS COMPLEX CULTURED. NO VIBRIO SP. CULTURED. NO CAMPYLOBACTER SP. CULTURED. NO CLOSTRIDIUM DIFFICILE CULTURED. CULTURE NEGATIVE FOR CLOSTRIDIUM PERFRINGENS. NO FUNGAL GROWTH TO DATE

Comment:
Large numbers of Photobacterium damselae and moderate numbers of E. coli have been cultured from the sample from J50 to date, final results are pending.

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Khanna, Sukriti

From: Sloan, Lara
Sent: August-16-18 12:03 PM
To: Thornton, Sheila; Cottrell, Paul
Subject: FW: News release: Crisis situation for endangered killer whales needs emergency response

Importance: High

Hi. This is my proposed e-mail response to the Times Colonist regarding the News release from the Suzuki Foundation this morning. For your review and approval.
Thanks for your time.
Lara

My proposed e-mail response.

[redacted]

From: Davies, Leri
Sent: August-16-18 10:10 AM
To: [redacted] (Times-Colonist)'
Cc: Sloan, Lara; Malikian, Janine
Subject: RE: News release: Crisis situation for endangered killer whales needs emergency response

Hi [redacted]

I am copying my colleagues Lara and Janine who are working on the SRKW file. Best and hope you are really well. Leri

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From: [redacted] Times-Colonist) [mailto[redacted]
Sent: 2018–August-16 9:23 AM
To: Davies, Leri
Subject: FW: News release: Crisis situation for endangered killer whales needs emergency response

Good morning, Leri –

I'm wondering if DFO will have a response to this today?

Best regards,

[redacted]
Reporter
Victoria Times Colonist
[redacted]

From: David Suzuki Foundation [mailto:media@davidsuzuki.org]
Sent: Thursday, August 16, 2018 9:13 AM
To: [redacted] (Times-Colonist)
Subject: News release: Crisis situation for endangered killer whales needs emergency response

News release from the David Suzuki Foundation and Raincoast Conservation Foundation

Crisis situation for endangered killer whales needs emergency response

Conservation groups call for Chinook fisheries closures and whale-watching restrictions for southern residents

Date: August 16, 2018

VANCOUVER — Critically endangered southern resident killer whales now require immediate closure of Chinook fisheries on B.C.'s coast and closure of all whale watching, according to the David Suzuki Foundation and the Raincoast Conservation Foundation.

"If an orca mother's prolonged display of grief and signs of starvation among J-pod don't inspire action, what will? We're in a crisis situation that requires an emergency response," said Jay Ritchlin, Western Canada director general for the David Suzuki Foundation.

Scientists and reviews by Fisheries and Oceans Canada agree that the biggest threat to the whales is a lack of abundance of and access to Chinook salmon, their favoured prey. The groups are calling on Minister of Fisheries and Oceans Jonathan Wilkinson to immediately close recreational and commercial marine Chinook fisheries. The closure will make more Chinook available to whales and will help the salmon return to their streams of origin to reproduce and ultimately rebuild. It is seen as the most effective way to reduce nutritional stress, improve birth rates and survival and reduce deaths for the southern residents.

"Recent events with J-pod, one of the three southern resident pods, has underscored the dire plight of these whales. What should be a healthy population of killer whales is failing to successfully feed, grow and reproduce. Given the federal government's failure to implement adequate threat reduction, we are calling for a closure of marine,

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commercial and recreational Chinook fisheries. This is the whales' best chance for survival," said Misty MacDuffee, biologist and wild salmon program director with Raincoast Conservation Foundation. As of August 2018, there have been no successful births in three years for the southern residents.

There is also a call for a closure of recreational and commercial whale watching that targets the endangered whales. "New distance regulations don't go far enough to limit disturbance to these whales as they forage for prey. We must limit vessel disturbance so there's a possibility that future generations will also be able to experience these whales," Ritchlin said.

The only exceptions to the full marine Chinook fishery closures would be for fisheries outside of the range of the whales and closer to spawning grounds that can demonstrate they are meeting biologically defined wild Chinook escapement targets (i.e., enough fish are returning to spawning grounds to replenish the stocks adequately).

Wild Chinook populations are in trouble. Those returning to the Fraser River before July have collapsed and 86 per cent of wild conservation units, a measurement for populations, in southern B.C. are at risk. B.C. fisheries also catch a number of endangered U.S.-bound Chinook salmon that are important to southern resident killer whales. Similar actions restricting fisheries and whale watching are also needed on the U.S. side of the border.

There is no rebuilding plan for the many highly depleted wild B.C. Chinook populations. Scientific evidence shows that artificial production of Chinook salmon, through operations such as hatcheries, can harm wild Chinook and are not suitable for rebuilding stocks.
Funding enforcement and monitoring of whale-protection measures is also needed, according to the organizations, which referred to steps taken by the government so far as partial and inadequate, voluntary, yet to begin and/or lacking timelines.

Between 1.5 and 2 million Chinook salmon are caught each year by Canadian and U.S. fisheries under the Pacific Salmon Treaty. The southern resident population requires about 1,400 Chinook each day to stay alive.

-END-

More information and media contacts:

David Suzuki Foundation
Jay Ritchlin, Director General, Western Canada
[redacted] Tel: 604 961 6840

Raincoast Conservation Foundation
Misty MacDuffee, Biologist and Wild Salmon Program Director
[redacted] Tel: 250 818 2136

Chris Genovali, Executive Director
[redacted] Tel: 250 888 3579

Backgrounder:

An emergency order under the Species at Risk Act
Southern resident killer whales are recognized as endangered under Canada's Species at Risk Act.

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In May, the federal government concluded these whales face imminent threats to their survival and recovery, requiring a response under the Species at Risk Act. Five organizations — the David Suzuki Foundation, Georgia Strait Alliance, the Natural Resources Defence Council, Raincoast Conservation Foundation and WWF Canada — petitioned the minister of fisheries and oceans and minister of the environment and climate change through Ecojustice to recommend an emergency order to protect the whales. The petition identified measures including the creation of feeding refuges closed to fishing, rebuilding depleted Chinook populations, limits to whale-watching, and regulatory measures to address underwater noise from shipping. In addition to immediate measures on Chinook fishing and whale watching outlined above, these measures must be in place by next year.

Rather than recommend an emergency order, the ministers took limited and inadequate steps such as implementing fisheries closures in some of the whales' foraging areas and clarifying that commercial and recreational whale watchers must stay 200 metres from killer whales. These actions were not supported by adequate enforcement or monitoring, and the other actions announced are voluntary, research-oriented, yet to begin and/or lack specific timelines.

The science

Studies indicate the whales had a 25 to 50 per cent risk of extinction by the end of the century under conditions that were present prior to 2014. Those conditions have since worsened.

Nearly 70 per cent of detected pregnancies between 2008 and 2014 failed due to nutritional stress associated with lack of prey.

Research by an international team of scientists, including Raincoast staff, showed that a modelled 30 per cent increase in the coast-wide Chinook abundance above the 1979-2008 average could increase southern resident growth rate by as much as 1.9 per cent (Lacy et al., 2017). When noise and disturbance are addressed along with Chinook abundance, population viability modelling shows that a 15 per cent increase in the coast-wide abundance, coupled with a 50 per cent reduction in vessel noise and disturbance, can meet the U.S. recovery target of 2.3 per cent annual growth (based on SRKW demographics to 2014, Lacy et al. 2017).

Source: Lacy, R.C., R. Williams, E. Ashe, K.C. Balcomb, L.J. N. Brent, C.W. Clark, D.P. Croft, D.A. Giles, M. MacDuffee and P.C. Paquet. 2017. Evaluating anthropogenic threats to endangered killer whales to inform effective recovery plans. *Scientific Reports* 7, Article no: 14119 doi:10.1038/s41598-017-14471-0

Whale watching

Over the past two decades, 14 to 28 boats routinely followed southern residents in the summer months, with peak numbers exceeding 70 boats (see Ashe et al. 2010, Soundwatch 2016). The presence and noise from these vessels reduces foraging activity and limit the whales' ability to acquire prey (Lusseau et al. 2009, Noren et al. 2009, Williams et al. 2014, Lacy et al. 2017, Holt et al. 2017).

Vessel traffic and noise is known to increase the duration and amplitude of calls and is likely to adversely affect the whales by masking and altering vital communication calls.

A full marine Chinook fishery closure along B.C.'s coast is needed because:

- Given very poor returns of most Chinook salmon, and the need for Chinook by critically endangered orca, all marine fisheries for Chinook should be immediately closed.
- Monitoring of the recreational fishery is too limited to effectively manage reducing the number of fish each fisher is allowed to take. Only a full closure will ensure adequate enforcement.
- A Chinook rebuilding plan that includes habitat restoration is needed to restore wild Chinook salmon abundance at the population level.
- Hatcheries are not an effective rebuilding tool because they most often do more harm to wild salmon rather than enhancing wild populations. Hatcheries are not a substitute for rebuilding wild Chinook stocks to feed whales, which is what is needed now.

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- Feeding refuges should be expanded and apply to all other fishing to ensure these whales have the space they need to forage and are sheltered from vessel disturbance so that they can catch their prey.

This email was sent to [redacted]
David Suzuki Foundation, 219-2211 West 4th Ave, Vancouver, British Columbia V6K4S2, Canada
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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-20-18 9:50 AM
To: Moore, Kendra
Cc: Harber, Lee
Subject: RE: J-Pod Update
Attachments: MECTS-#3949687-v7-IN-Southern_Resident_Killer_Whale_Update.docx

Hi Kendra,
Looks good, some miner suggested edits.
Best,
Paul

-----Original Message-----
From: Moore, Kendra
Sent: August-20-18 9:35 AM
To: Cottrell, Paul
Cc: Harber, Lee
Subject: RE: J-Pod Update

Hello again,

Attached is the updated SRKW note. Please review and provide any comments. If you can provide any more info on NOAA's response plan, as well as J35 sightings, that would be great.

Thanks again,

Kendra

-----Original Message-----
From: Moore, Kendra
Sent: August-20-18 12:03 PM
To: Cottrell, Paul
Cc: Harber, Lee
Subject: RE: J-Pod Update

Great, thanks for the update Paul.

Is there anything to add regarding NOAA. Plans on their end regarding treatment. Will or have they requested to update their permit to include parasite treatment, or do they plan on surveying in Canadian waters?

I will create a new update note for the DM and send to you shortly for input.

Kendra

-----Original Message-----
From: Cottrell, Paul
Sent: August-20-18 11:37 AM

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To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Kennedy, Eddy; Lowe, Carmel; Sloan, Lara; Thornton, Sheila; Harber, Lee; Webb, Cheryl; Moore, Kendra
Subject: J-Pod Update

Hi All,
J-pod was last seen yesterday afternoon, heading west offshore from Sheringham Point. Strait Watch (DFO HSP funded program) has been covering off observations in in-shore waters along with the DFO RM MM response program. Conservation and Protect has been notified when/where J-pod are in in-shore waters and have been on-water on multiple occassion. Brian Gisborne (on contract with DFO) MM researcher will be working the next week to assist with monitoring and re-sighting J-pod in off-shore waters. I will update you if J-pod is located today and provide any updates as they happen.

Best,

Paul Cottrell
Pacific Marine Mammal Coordinator
Fisheries and Oceans Canada
200-401 Burrard St
Vancouver, BC
V6C 3S4
(604) 666-9965

From: Cottrell, Paul
Sent: Saturday, August 18, 2018 9:03 AM
To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Kennedy, Eddy; Lowe, Carmel; Sloan, Lara; Thornton, Sheila; Harber, Lee; Webb, Cheryl; Cauffope, Genevieve
Subject: Fw: Lab findings and treatment priorities

Hi All,
Fyi, some information and analysis from the veterinarian team on the parasite found in the recent collected fecal sample from J-pod. Dr Raverty from the Abottsford animal health Centre has been instrumental in review/evaluation. Louise it may be worth working with Mike (NOAA comms) and Dr Raverty to ensure our comms materials are consistent. Let me know how I can help.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: Friday, August 17, 2018 5:39 PM
To: Cottrell, Paul
Subject: Fw: Lab findings and treatment priorities

From: Raverty, Stephen AGRI:EX
Sent: Friday, August 17, 2018 5:27:06 PM
To: Michael Milstein - NOAA Federal
Cc: Jim Milbury; Ruth Howell - NOAA Federal; Raverty, Stephen AGRI:EX

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Subject: Re: Lab findings and treatment priorities

hi Michael,

the paragraph reads well and is fine as is, but i have added a few edits by track changes in the attached word document that may be more accurate, you are welcome to consider them as needed.

At present both the antibiotic and parasite treatments can be administered by dart or pole syringe, but not necessarily at the same time, so there may be to be some consideration given as to which treatment is the priority. Most likely the antibiotic, but this may still be under review.

cheers

Stephen

From: Michael Milstein - NOAA Federal [redacted]
Sent: Friday, August 17, 2018 3:51 PM
To: Raverty, Stephen AGRI:EX
Cc: Jim Milbury; Ruth Howell - NOAA Federal
Subject: Re: Lab findings and treatment priorities

Stephen,

Thank you so much for this background and explanation. It's very helpful to us in understanding how to explain the findings to the public.

Can you tell me if the following reads accurately to you?

August 17: Results are starting to come in from several top laboratories around the country that are supporting the J50/Scarlet response. First, a fecal sample collected last weekend from a group of three J Pod whales (J16/Slick, J42/Echo, and J50/Scarlet), showed high levels of Contracaecum, a nematode parasite that is commonly found in killer whales and other marine mammals. (In a healthy marine mammal, presence of this nematode is not usually a problem. In animals that are emaciated or otherwise compromised, however, the nematode can burrow through the stomach lining introducing infection to the bloodstream, or it can bore into the internal organs and cause damage and pathology.) While we cannot be sure the sample came from J50/Scarlet, the veterinary team has updated her treatment priorities to include antibiotics and a dewormer. Both have proved successful and safe in other cetaceans. The treatment will help J50/Scarlet by reducing burdens on her system and help her to start regaining the weight she has lost. The whales remain in open waters off the west side of Vancouver Island, beyond the reach of the response teams.

Thank you again for your willingness to help us communicate this to the public.

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Best wishes,
Michael

On Fri, Aug 17, 2018 at 12:12 PM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca<mailto:Stephen.Raverty@gov.bc.ca>> wrote:
Hi Michael,
Thank you for the note below. It is important to appreciate that these parasites are widespread within the population of killer whales and other marine mammal species (cetaceans and pinnipeds) and it is not unusual to identify them on post mortem exam of animals that may die of conditions unrelated to parasitism (ship strike, HABs etc). As these whales prey share and eat the same fish species, it is likely that they have all been exposed and are infected with varying worm burdens.

Typically the parasites may lie over or migrate through the folds of the stomach lining or may be interspersed within the contents of the small and large intestinal track. However, in stranded animals that present with evidence of debilitation or feature other more chronic disease processes, in the nonglandular compartment (of the stomach) the parasites (Contracaecum) may burrow through the lining of stomach, resulting in a nodular proliferations and scar formation in the wall of the stomach. We try to gauge the number of these nodules, the size of any associated ulcers, and number and depth of worms penetrating within the stomach ulcers and digestive track, in context of the overall health of an individual animal. An animal that is in good body condition and able to successfully forage can have large numbers of worms present with no evidence of systemic or clinical disease; whereas, an animal that may have other health issues (including emaciation) may have smaller numbers of worms that can result in more significant tissue injury or pathology. The stomach ulcers can be a concern and some of the consequences of these lesions may include introduction of stomach or intestinal bacteria into the blood stream with secondary septicemia or in more extreme circumstances, perforation of the wall with secondary peritonitis. Some worms can migrate through the lining of the stomach or intestine and travel along the surface or through the internal organs with some associated pathology.

In the fecal sample collected in the vicinity of J16, 42 and 50, moderate numbers of eggs were identified by fecal floatation. The actual numbers of worms in the digestive track and associated pathology cannot be inferred from this finding alone and inadvertent treatment of J16, J42 or another whale within the pod should not have an adverse impact. The parasite treatment and antibiotic have proved successful and safe in other cetacean species.

Please let me know if this helps, would be pleased to call early afternoon should you need any clarification or other details. If needed, you can share your questions with the vet group to see if there may be a consensus of clinical and pathologic interpretations.

Kindest regards,
Stephen

From: Michael Milstein - NOAA Federal [mailto
Sent: Friday, August 17, 2018 11:20 AM
To: Raverty, Stephen AGRI:EX
Cc: Kristin Wilkinson - NOAA Affiliate; Jim Milbury; Ruth Howell - NOAA Federal
Subject: Lab findings and treatment priorities

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Hello Stephen,

I hope you are doing well. It has been good to hear your voice on the debrief calls over the last few weeks.

I wanted to let you know that we (the communications team) are planning to begin sharing the lab results for J50 as they come in. We will of course do so only after the veterinary team has considered the results and the treatment priorities. Please let us know if you have any concerns.

One question I have is, how does Contracaecum affect the animal? As we strive to translate the findings for the public, we would like to help them understand what this finding tells us about J50's condition, and how we plan to respond to that. Is there any concern about the treatment affecting another animal if the fecal sample turns out to be from a different animal than J50?

Thank you for all your hard work on this response.

Best,
Michael

--

Michael Milstein

Public Affairs Officer

NOAA Fisheries

West Coast Region<http://www.westcoast.fisheries.noaa.gov/>, Northwest Fisheries Science Center<http://www.nwfsc.noaa.gov/>, Southwest Fisheries Science Center<https://swfsc.noaa.gov/>

Office: 503-231-6268

Cell: [redacted]

[redacted]

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Michael Milstein

Public Affairs Officer

NOAA Fisheries

West Coast Region<http://www.westcoast.fisheries.noaa.gov/>, Northwest Fisheries Science Center<http://www.nwfsc.noaa.gov/>, Southwest Fisheries Science Center<https://swfsc.noaa.gov/>

Office: 503-231-6268

Cell: s.19(1)

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s.21(1)(b)

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[redacted]

Southern Resident Killer Whale Update

(August 20, 2018 – 12300 EDT)

[redacted]

[redacted]

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-20-18 7:19 AM
To: Moore, Kendra; Harber, Lee
Subject: Re: Lab findings and treatment priorities

Hi Kendra,
I'll be providing an update this morning.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Moore, Kendra
Sent: Monday, August 20, 2018 6:42 AM
To: Cottrell, Paul; Harber, Lee
Subject: FW: Lab findings and treatment priorities

Good morning Paul and Lee,

I will provide mino with an update by end of day in Ottawa about SRKW. If you could provide any comments or updates regarding J50, J35, J-pod and treatment operations by noon Pacific time that would be great.

Specifically, regarding the lab findings of parasites, has NOAA submitted a request to update their permit to administer parasite treatment?

Thanks,

Kendra

-----Original Message-----
From: Cottrell, Paul
Sent: August-18-18 12:19 PM
To: Moore, Kendra
Subject: Fw: Lab findings and treatment priorities

Hi Kendra,
Fyi, have a great weekend!
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Saturday, August 18, 2018 9:03 AM
To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Kennedy, Eddy; Lowe, Carmel; Sloan, Lara; Thornton, Sheila; Harber, Lee; Webb, Cheryl; Cauffope, Genevieve
Subject: Fw: Lab findings and treatment priorities

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Hi All,
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Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: Friday, August 17, 2018 5:39 PM
To: Cottrell, Paul
Subject: Fw: Lab findings and treatment priorities

From: Raverty, Stephen AGRI:EX
Sent: Friday, August 17, 2018 5:27:06 PM
To: Michael Milstein - NOAA Federal
Cc: Jim Milbury; Ruth Howell - NOAA Federal; Raverty, Stephen AGRI:EX
Subject: Re: Lab findings and treatment priorities

hi Michael,

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Stephen

From: Michael Milstein - NOAA Federal [redacted]
Sent: Friday, August 17, 2018 3:51 PM
To: Raverty, Stephen AGRI:EX
Cc: Jim Milbury; Ruth Howell - NOAA Federal
Subject: Re: Lab findings and treatment priorities

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Best wishes,
Michael

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Kindest regards,
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From: Michael Milstein - NOAA Federal [mailto:
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To: Raverty, Stephen AGRI:EX
Cc: Kristin Wilkinson - NOAA Affiliate; Jim Milbury; Ruth Howell - NOAA Federal
Subject: Lab findings and treatment priorities

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Thank you for all your hard work on this response.

Best,
Michael

--

Michael Milstein

Public Affairs Officer

NOAA Fisheries

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West Coast Region<http://www.westcoast.fisheries.noaa.gov/>, Northwest Fisheries Science Center<http://www.nwfsc.noaa.gov/>, Southwest Fisheries Science Center<https://swfsc.noaa.gov/>

Office: 503-231-6268

Cell: [redacted]

[redacted]

[https://lh3.googleusercontent.com/H6MnkdnMfv4eUX0GhR2-SN83dAP1RxN0N_SRDwm95o_X2Vfwry9KuzzziZ3CFj3ZzJpcntkUS2ydNqWe9FyIscKNakMZMDENWjC07X5ao37H1iV51awX6yiU3oU]

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Michael Milstein

Public Affairs Officer

NOAA Fisheries

West Coast Region<http://www.westcoast.fisheries.noaa.gov/>, Northwest Fisheries Science Center<http://www.nwfsc.noaa.gov/>, Southwest Fisheries Science Center<https://swfsc.noaa.gov/>

Office: 503-231-6268

Cell: [redacted]

[redacted]

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[https://lh3.googleusercontent.com/H6MnkdnMfv4eUX0GhR2-SN83dAP1RxN0N_SRDwm95o_X2Vfwry9KuzzziZ3CFj3ZzJpcntkUS2ydNqWe9FyIscKNakMZMDENWjC07X5ao37H1iV51awX6yiU3oU]

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s.19(1)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-20-18 1:25 PM
To: Raverty, Stephen AGRI:EX
Subject: Re: MEHDS Updated Results - J50

No problem!

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Raverty, Stephen AGRI:EX
Sent: Monday, August 20, 2018 1:19 PM
To: Cottrell, Paul
Subject: RE: MEHDS Updated Results - J50

Thank you Paul, would it be alright to post pone it for 30 minutes, noaa has schedule a conf call for the vets from 9:00-10:30 am
S

From: Cottrell, Paul [mailto:Paul.Cottrell@dfo-mpo.gc.ca]
Sent: Monday, August 20, 2018 1:18 PM
To: Raverty, Stephen AGRI:EX
Subject: Re: MEHDS Updated Results - J50

Thanks Stephen, Yes I will be on call.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Raverty, Stephen AGRI:EX
Sent: Monday, August 20, 2018 1:14 PM
To: Cottrell, Paul
Subject: FW: MEHDS Updated Results - J50

Paul,
Are you able to make the call this Thurs at 10:00? Will send out discussion points
S

From: [redacted] **On Behalf Of** Tracey Goldstein
Sent: Monday, August 20, 2018 10:57 AM
To: Raverty, Stephen AGRI:EX
Cc: Joseph Karl Gaydos; Brad Hanson - NOAA Federal; Kristin Wilkinson - NOAA Federal; Hendrik Nollens
Subject: Re: MEHDS Updated Results - J50

Dear All,

Please find attached updated microbiology results for the sample from J50 -final results are still pending. Please note *Photobacterium damselae* has been renamed and was previously known as *Vibrio damselae and Pasteurella damselae.*

s.19(1)

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Best, Tracey

Photobacterium damselae subsp. *piscicida* (formerly *Pasteurella piscicida*)

On Fri, Aug 17, 2018 at 6:53 PM, Tracey Goldstein < > wrote:
Dear All,

Please find attached updated microbiology results for the sample from J50 - will send final results next week.

Best, Tracey

On Thu, Aug 16, 2018 at 8:31 PM, Tracey Goldstein wrote:
Dear All,

Please find attached preliminary microbiology results for the sample from J50 - will send additional results when we have them.

Best, Tracey

On Wed, Aug 15, 2018 at 7:58 PM, Tracey Goldstein < > wrote:
Hi All,

Please find attached the parasitology report for J-50. The fungal and bacterial cultures have been started.

We will run Brucella PCR on the swab sample next week.

Best, Tracey

On Wed, Aug 15, 2018 at 3:03 PM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:
Tracey
The fungal culture and aerobic culture would be the priority, and if there is sufficient feces the dfa may be of interest, but not necessary. If you are able to run pcr for Brucella, that would be of particular value (A73 had titers over 150,000). Will know for the future to submit more volume of feces for you.
Sorry and thank you.
Step

From: **On Behalf Of** Tracey Goldstein
Sent: Wednesday, August 15, 2018 2:12 PM
To: Joseph Karl Gaydos
Cc: Raverty, Stephen AGRI:EX; Hendrik Nollens

Subject: Re: J50 4 year old kw fecal submission to arrive tomorrow, Aug 15, 2018

Hi All,

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The sample is only 300ul so we can't do everything you are asking with that volume.

We are starting with bacterial culture and fecal panel, maybe can do a smear to look for parasites by light microscopy but not enough for a fecal float, can try to do DFA for Giardia and Crypto if there is enough and if any left over they can try fungal culture.

If you have more sample to ship that would be good.

Best, Tracey

On Wed, Aug 15, 2018 at 1:41 PM, Tracey Goldstein < > wrote:
Samples arrived safely, T

On Tue, Aug 14, 2018 at 3:43 PM, Joseph Karl Gaydos > wrote:
Thank you Steve and than you Tracey.

Please bill to me and tell Lori it should be billed agains the NOAA KW Stranding Contract.

Best,
JOE

Joseph K. Gaydos
360-376-3910
www.seadocsociety.org

On Aug 14, 2018, at 11:37 AM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

Hi Tracey,
Would you please run aerobic and anaerobic culture, the extended enteric fecal culture, fungal culture and id (in case there are yeast), and parasitology (floatation and sedimentation). IF there are protozoa detected by parasitology, we could potentially request pcr for cryptosporidium and giardia, but will away the parasit results.
Thank you
Stephen

From: **On Behalf Of** Tracey Goldstein
Sent: Tuesday, August 14, 2018 11:27 AM
To: Raverty, Stephen AGRI:EX
Cc: Nollens, Hendrik; Joseph K. Gaydos; Kristin Wilkinson - NOAA Federal
Subject: Re: J50 4 year old kw fecal submission to arrive tomorrow, Aug 15, 2018

Thanks Stephen.

So to be clear we are submitting the sample for aerobic and anaerobic bacterial culture, and for fecal float for parasite ID?

Thankst Tracey

On Tue, Aug 14, 2018 at 9:40 AM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

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Tracey
An emaciated 4 year old female kw J50 in the Salish Sea that has been closely monitored for the last couple of weeks and a 20 ml fecal sample was opportunistically recovered when the mom, brother and J50 swam near a research boat Sunday evening. A subsample of the feces believed to be from 1 of the 3 animals will couriered to your lab from SeaWorld today and should arrive tomorrow morning (genetics is currently underway to confirm the animal id).
Could you please screen the sample for enteric bacterial pathogens, fungal culture, and parasitology. If indicated, pcr for select pathogens may be considered, but could you please let Hendrik, Joe and I know.
As always, thank you for your help in working up these challenging cases. ☺
Stephen

--
Tracey Goldstein, PhD
One Health Institute
School of Veterinary Medicine
University of California
Davis, CA 95616
Phone: (530) 752-0412
Fax: (530) 752-3318
E-mail: [redacted]

s.16(2)

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Dozie, Juachi

From: Harber, Lee
Sent: August-20-18 12:50 PM
To: Thomson, Andrew; Davis, Neil
Cc: Davis, Neil; Barton, Meagan; Johal, Sharan
Subject: RE: Urgent Questions: SRKW Membership and Public Meeting
Attachments: SRKW-IMAG invitatation to AVICC .docx; SRKW Indigenous and Multi-stakeholder Advisory Group DRAFT TOR - FINAL Sent to Participants.docx

Hi Andy,

Please find attached a draft invitation letter to AVICC for your review. In the invite I have referenced the draft ToR which I suggest we share with them. I have sent a follow up email to participants earlier today to remind them to provide feedback on the ToR.

Neil: if you can please review as well.

Thanks
Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Thomson, Andrew
Sent: 2018–August-20 11:52 AM
To: Harber, Lee
Cc: Davis, Neil; Barton, Meagan; Johal, Sharan
Subject: Fw: Urgent Questions: SRKW Membership and Public Meeting

Lee

Please draft a letter of invite to the AVICC to be sent by RR for participation in the SRKW advisory group. They can nominate a rep and indientify an alternate

I would like this to be up in RDG's office today

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4

s.21(1)(a)
s.21(1)(b)
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andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Johal, Sharan <Sharan.Johal@dfo-mpo.gc.ca>
Sent: Monday, August 20, 2018 11:49 AM
To: Thomson, Andrew
Subject: RE: Urgent Questions: SRKW Membership and Public Meeting

Thanks Andy. I have relayed the information on. Will let you know if there's anything further.

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: Thomson, Andrew
Sent: August-20-18 9:55 AM
To: Johal, Sharan
Subject: RE: Urgent Questions: SRKW Membership and Public Meeting

[redacted]

No options paper yet, will see what we can put together this week.

Andrew J L Thomson
Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

From: Johal, Sharan
Sent: Monday, August 20, 2018 9:52 AM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: RE: Urgent Questions: SRKW Membership and Public Meeting

Hi Andy,

[redacted]

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

s.21(1)(a)
s.21(1)(b)
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From: Thomson, Andrew
Sent: August-20-18 8:39 AM
To: Johal, Sharan
Subject: Re: Urgent Questions: SRKW Membership and Public Meeting

On the SRKW membership

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

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andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Johal, Sharan
Sent: Monday, August 20, 2018 8:20 AM
To: Thomson, Andrew
Subject: FW: Urgent Questions: SRKW Membership and Public Meeting

Hi Andy,

Please see the urgent request below from DMO. They are requesting an update this am.

Thanks!

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: Jarjour, Jasmine
Sent: August-20-18 8:12 AM
To: Kaba, Kyle; Johal, Sharan

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s.21(1)(a)

s.21(1)(b)

Cc: Khwaja, Saba; Hirani, Samia; Kahn, Zoe; Butcher, Ashley
Subject: Urgent Questions: SRKW Membership and Public Meeting
Importance: High

Hi Kyle & Cara,

[redacted]

Jasmine Jarjour
DMO
613-998-3152

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Fisheries and Oceans Canada

Pêches et Océans Canada

Regional Director General
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Vancouver, British Columbia
V6C 3S4

Directrice générale régionale
Région du Pacifique
Pièce 200 – 401 rue Burrard
Vancouver (C.-B.)
V6C 3S4

August 20, 2018

Invitation to participate on the Southern Resident Killer Whale Indigenous and Multi-Stakeholder Advisory Group

To: Association of Vancouver Island Coast Communities

On behalf of Fisheries and Oceans Canada, Transport Canada, and Environment and Climate Change Canada, we invite you, or your representative, to participate in the Southern Resident Killer Whale Indigenous and Multi-Stakeholder Advisory Group.

You have been invited to participate in this advisory group given the important role that your organization plays in addressing threats to the Southern Resident Killer Whale.

The advisory group met previously on June 22nd to discuss the measures under Canada's *Whales Initiative* under Budget 2018, and also on July 30th where updates on recently implemented recovery measures were presented by federal officials and a draft Terms of Reference for the advisory group was provided to participants for consideration (attached).

We would very much value your participation on the advisory group where we will share information on recovery measures underway, identify opportunities for collaboration, and listen to your thoughts on how to best prioritize recovery efforts going forward.

Please RSVP to the DFO Marine Mammal Advisor, Mr. Lee Harber, at Lee.Harber@dfo-mpo.gc.ca.

Sincerely,

Rebecca Reid
Regional Director General

Canada

Pages 3220 to / à 3227

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pages 1362 to / à 1369

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Dozie, Juachi

From: Harber, Lee
Sent: August-20-18 1:37 PM
To: Thomson, Andrew; Davis, Neil
Cc: Davis, Neil; Barton, Meagan; Johal, Sharan
Subject: RE: Urgent Questions: SRKW Membership and Public Meeting
Attachments: AVICC Invitation to participate in SRKW Advisory Group.docx

Andy –letter requests their RSVP by Friday Aug. 24 – please confirm this is reasonable.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Thomson, Andrew
Sent: 2018–August-20 12:56 PM
To: Harber, Lee; Davis, Neil
Cc: Davis, Neil; Barton, Meagan; Johal, Sharan
Subject: RE: Urgent Questions: SRKW Membership and Public Meeting

I've fine with the note, can we give a quick heads up to our other working group partners at ECCC and TC of the impending invite.

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

---

From: Harber, Lee
Sent: Monday, August 20, 2018 12:50 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Barton, Meagan <Meagan.Barton@dfo-mpo.gc.ca>; Johal, Sharan <Sharan.Johal@dfo-mpo.gc.ca>
Subject: RE: Urgent Questions: SRKW Membership and Public Meeting

Hi Andy,

Please find attached a draft invitation letter to AVICC for your review. In the invite I have referenced the draft ToR which I suggest we share with them. I have sent a follow up email to participants earlier today to remind them to provide feedback on the ToR.

Neil: if you can please review as well.

Thanks
Lee

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Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Thomson, Andrew
Sent: 2018–August-20 11:52 AM
To: Harber, Lee
Cc: Davis, Neil; Barton, Meagan; Johal, Sharan
Subject: Fw: Urgent Questions: SRKW Membership and Public Meeting

Lee

Please draft a letter of invite to the AVICC to be sent by RR for participation in the SRKW advisory group. They can nominate a rep and indientify an alternate

I would like this to be up in RDG's office today

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
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andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Johal, Sharan <Sharan.Johal@dfo-mpo.gc.ca>
Sent: Monday, August 20, 2018 11:49 AM
To: Thomson, Andrew
Subject: RE: Urgent Questions: SRKW Membership and Public Meeting

Thanks Andy. I have relayed the information on. Will let you know if there's anything further.

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: Thomson, Andrew
Sent: August-20-18 9:55 AM
To: Johal, Sharan
Subject: RE: Urgent Questions: SRKW Membership and Public Meeting

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[redacted]

No options paper yet, will see what we can put together this week.

Andrew J L Thomson
Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

---

From: Johal, Sharan
Sent: Monday, August 20, 2018 9:52 AM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: RE: Urgent Questions: SRKW Membership and Public Meeting

Hi Andy,

[redacted]

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: Thomson, Andrew
Sent: August-20-18 8:39 AM
To: Johal, Sharan
Subject: Re: Urgent Questions: SRKW Membership and Public Meeting

On the SRKW membership

[redacted]

Andrew J L Thomson

s.21(1)(a)

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s.21(1)(b)

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Thanks!

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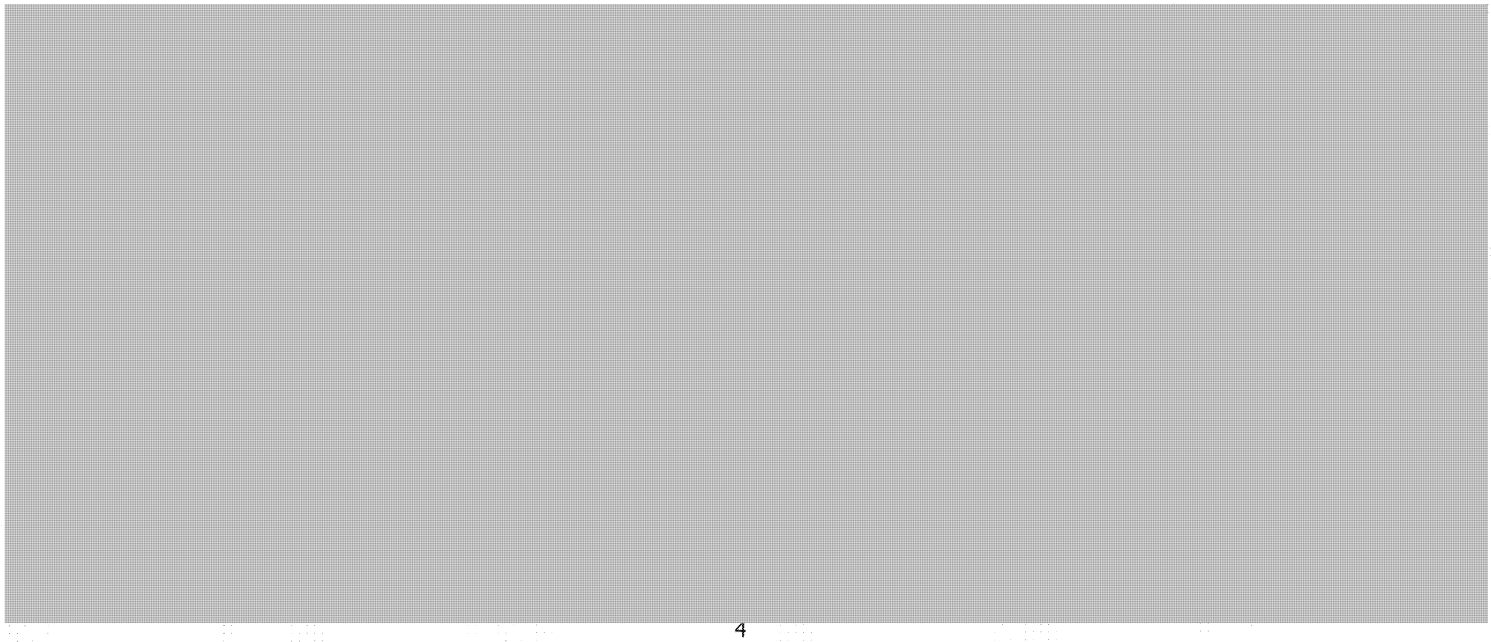
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: Jarjour, Jasmine
Sent: August-20-18 8:12 AM
To: Kaba, Kyle; Johal, Sharan
Cc: Khwaja, Saba; Hirani, Samia; Kahn, Zoe; Butcher, Ashley
Subject: Urgent Questions: SRKW Membership and Public Meeting
Importance: High

Hi Kyle & Cara,



s.21(1)(a)

s.21(1)(b)

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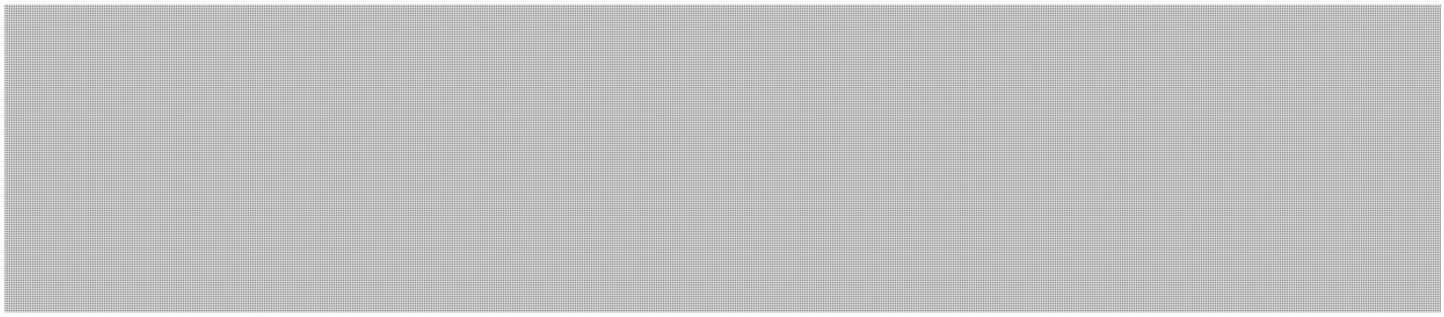

Jasmine Jarjour
DMO
613-998-3152

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Fisheries and Oceans Canada

Regional Director General
Pacific Region
Suite 200 – 401 Burrard Street
Vancouver, British Columbia
V6C 3S4

Pêches et Océans Canada

Directrice générale régionale
Région du Pacifique
Piéce 200 – 401 rue Burrard
Vancouver C.-B.
V6C 3S4

Your file *Votre reference*
Our file *Notre reference*

Invitation to participate on the Southern Resident Killer Whale Indigenous and Multi-Stakeholder Advisory Group

To: Association of Vancouver Island Coast Communities

On behalf of Fisheries and Oceans Canada, Transport Canada, and Environment and Climate Change Canada, we invite you, or your representative, to participate in the Southern Resident Killer Whale Indigenous and Multi-Stakeholder Advisory Group.

You have been invited to participate in this advisory group given the important role that your organization plays in addressing threats to the Southern Resident Killer Whale.

The advisory group met previously on June 22nd, 2018 to discuss the measures under Canada's *Whales Initiative* under Budget 2018, and also on July 30th, 2018 where updates on recently implemented recovery measures were presented by federal officials and a draft Terms of Reference for the advisory group was provided to participants for consideration (attached).

We would very much value your participation in the advisory group where we will share information on current recovery measures, identify opportunities for collaboration, and listen to your thoughts on how to best prioritize recovery efforts going forward.

Please RSVP to the DFO Marine Mammal Advisor, Mr. Lee Harber, at Lee.Harber@dfo-mpo.gc.ca by Friday August 24.

Yours sincerely,

Rebecca Reid
Regional Director General
Pacific Region

Canada

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Khanna, Sukriti

From: Davis, Neil
Sent: August-20-18 9:39 AM
To: Harber, Lee; Thomson, Andrew; Webb, Cheryl; Lowe, Carmel
Subject: RE: next SRKW Indigenous & multistakeholder advisory group meeting

I agree that early Oct would be quite tight. Nov 1 is fine for me but my availability shouldn't influence the choice of date

From: Harber, Lee
Sent: Monday, August 20, 2018 9:36 AM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Subject: next SRKW Indigenous & multistakeholder advisory group meeting

Hi there,

We were looking at Oct. 25 for the next meeting however TC informed me that this coincides with the International Maritime Organisation's Marine Environmental Protection Committee (MEPC) meeting that takes place in London UK where Sonia Simard (ship fed), Michael Jasny (NRDC) and Denien Ford (BC Chamber of Shipping), as well as TC staff will be attending.

We could look at earlier in October however that would give us a bit less time to prepare. The SRWK WA State Task Force is also releasing their annual report / recommendations on Nov 1 (Draft due Oct. 25), which would be good to be aligned / provide updates on this at the next meeting. The other date which Rebecca is available is Nov. 1. Does that work well for you guys? I would like to firm up this date soon so we can send out a save the date to participants.

Thanks
Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

s.69(1)(g) re: (a)
s.69(1)(g) re: (e)

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Davis, Neil

From: Davis, Neil
Sent: Monday, August 20, 2018 4:27 PM
To: Barton, Meagan
Cc: Thomson, Andrew
Subject: SRKW
Attachments:

Hi Meagan

Can you look for 45 mins ideally for me, Cheryl, Andy, and Carmel to discuss

Many of my mtgs this week can be rescheduled if we need to find time, but I'm not here Thu. Sukriti can help w figuring out what can be rescheduled if necessary

Neil Davis
Director, Resource Management
Fisheries and Oceans Canada | Government of Canada
Neil.Davis@dfo-mpo.gc.ca | Tel: (604) 666-0115

Directeur, Gestion des Ressources
Pêches et Océans Canada | Gouvernement of Canada
Neil.Davis@dfo-mpo.gc.ca | Tel: (604) 666-0115

Pages 3236 to / à 3238

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pages 3360 to / à 3362

s.21(1)(a)

s.21(1)(b)

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Dozie, Juachi

From: Jenkins, Randy
Sent: August-20-18 4:38 PM
To: Davis, Neil; Burns, Adam; Scott, Paul G; Moore, Kendra
Cc: Thomson, Andrew
Subject: Re: Lab findings and treatment priorities

Thanks

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Davis, Neil
Sent: Monday, August 20, 2018 19:31
To: Jenkins, Randy; Burns, Adam; Scott, Paul G; Moore, Kendra
Cc: Thomson, Andrew
Subject: RE: Lab findings and treatment priorities

[redacted]

-----Original Message-----
From: Jenkins, Randy
Sent: Monday, August 20, 2018 9:56 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>
Subject: RE: Lab findings and treatment priorities

[redacted]

-----Original Message-----
From: Davis, Neil
Sent: Monday, August 20, 2018 12:45 PM
To: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>
Subject: FW: Lab findings and treatment priorities

Fyi. Vet assessment summary is outlined below.

-----Original Message-----
From: Girouard, Louise
Sent: Sunday, August 19, 2018 11:56 AM
To: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Kennedy, Eddy <Eddy.Kennedy@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-

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mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Cauffope, Genevieve <Genevieve.Cauffope@dfo-mpo.gc.ca>
Subject: Re: Lab findings and treatment priorities

Thanks Paul.
My BB was playing games this morning. NOAA has been tweeting out the information and we are retweeting.

Here is one of the atricles:
https://www.cbc.ca/news/canada/british-columbia/researchers-lead-cause-distressed-killer-whale-j-50-illness-1.4790442

L

Original Message
From: Cottrell, Paul
Sent: Saturday, August 18, 2018 9:03 AM
To: Girouard, Louise; Thomson, Andrew; Davis, Neil; Kennedy, Eddy; Lowe, Carmel; Sloan, Lara; Thornton, Sheila; Harber, Lee; Webb, Cheryl; Cauffope, Genevieve
Subject: Fw: Lab findings and treatment priorities

Hi All,
Fyi, some information and analysis from the veterinarian team on the parasite found in the recent collected fecal sample from J-pod. Dr Raverty from the Abottsford animal health Centre has been instrumental in review/evaluation. Louise it may be worth working with Mike (NOAA comms) and Dr Raverty to ensure our comms materials are consistent. Let me know how I can help.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: Friday, August 17, 2018 5:39 PM
To: Cottrell, Paul
Subject: Fw: Lab findings and treatment priorities

From: Raverty, Stephen AGRI:EX
Sent: Friday, August 17, 2018 5:27:06 PM
To: Michael Milstein - NOAA Federal
Cc: Jim Milbury; Ruth Howell - NOAA Federal; Raverty, Stephen AGRI:EX
Subject: Re: Lab findings and treatment priorities

hi Michael,

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s.19(1)

the paragraph reads well and is fine as is, but i have added a few edits by track changes in the attached word document that may be more accurate, you are welcome to consider them as needed.

At present both the antibiotic and parasite treatments can be administered by dart or pole syringe, but not necessarily at the same time, so there may be to be some consideration given as to which treatment is the priority. Most likely the antibiotic, but this may still be under review.

cheers

Stephen

From: Michael Milstein - NOAA Federal [redacted]
Sent: Friday, August 17, 2018 3:51 PM
To: Raverty, Stephen AGRI:EX
Cc: Jim Milbury; Ruth Howell - NOAA Federal
Subject: Re: Lab findings and treatment priorities

Stephen,

Thank you so much for this background and explanation. It's very helpful to us in understanding how to explain the findings to the public.

Can you tell me if the following reads accurately to you?

August 17: Results are starting to come in from several top laboratories around the country that are supporting the J50/Scarlet response. First, a fecal sample collected last weekend from a group of three J Pod whales (J16/Slick, J42/Echo, and J50/Scarlet), showed high levels of Contracaecum, a nematode parasite that is commonly found in killer whales and other marine mammals. (In a healthy marine mammal, presence of this nematode is not usually a problem. In animals that are emaciated or otherwise compromised, however, the nematode can burrow through the stomach lining introducing infection to the bloodstream, or it can bore into the internal organs and cause damage and pathology.) While we cannot be sure the sample came from J50/Scarlet, the veterinary team has updated her treatment priorities to include antibiotics and a dewormer. Both have proved successful and safe in other cetaceans. The treatment will help J50/Scarlet by reducing burdens on her system and help her to start regaining the weight she has lost. The whales remain in open waters off the west side of Vancouver Island, beyond the reach of the response teams.

Thank you again for your willingness to help us communicate this to the public.

Best wishes,
Michael

On Fri, Aug 17, 2018 at 12:12 PM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca<mailto:Stephen.Raverty@gov.bc.ca>> wrote:

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Hi Michael,
Thank you for the note below. It is important to appreciate that these parasites are widespread within the population of killer whales and other marine mammal species (cetaceans and pinnipeds) and it is not unusual to identify them on post mortem exam of animals that may die of conditions unrelated to parasitism (ship strike, HABs etc). As these whales prey share and eat the same fish species, it is likely that they have all been exposed and are infected with varying worm burdens.

Typically the parasites may lie over or migrate through the folds of the stomach lining or may be interspersed within the contents of the small and large intestinal track. However, in stranded animals that present with evidence of debilitation or feature other more chronic disease processes, in the nonglandular compartment (of the stomach) the parasites (Contracaecum) may burrow through the lining of stomach, resulting in a nodular proliferations and scar formation in the wall of the stomach. We try to gauge the number of these nodules, the size of any associated ulcers, and number and depth of worms penetrating within the stomach ulcers and digestive track, in context of the overall health of an individual animal. An animal that is in good body condition and able to successfully forage can have large numbers of worms present with no evidence of systemic or clinical disease; whereas, an animal that may have other health issues (including emaciation) may have smaller numbers of worms that can result in more significant tissue injury or pathology. The stomach ulcers can be a concern and some of the consequences of these lesions may include introduction of stomach or intestinal bacteria into the blood stream with secondary septicemia or in more extreme circumstances, perforation of the wall with secondary peritonitis. Some worms can migrate through the lining of the stomach or intestine and travel along the surface or through the internal organs with some associated pathology.

In the fecal sample collected in the vicinity of J16, 42 and 50, moderate numbers of eggs were identified by fecal floatation. The actual numbers of worms in the digestive track and associated pathology cannot be inferred from this finding alone and inadvertent treatment of J16, J42 or another whale within the pod should not have an adverse impact. The parasite treatment and antibiotic have proved successful and safe in other cetacean species.

Please let me know if this helps, would be pleased to call early afternoon should you need any clarification or other details. If needed, you can share your questions with the vet group to see if there may be a consensus of clinical and pathologic interpretations.

Kindest regards,
Stephen

From: Michael Milstein - NOAA Federal [mailto:
Sent: Friday, August 17, 2018 11:20 AM
To: Raverty, Stephen AGRI:EX
Cc: Kristin Wilkinson - NOAA Affiliate; Jim Milbury; Ruth Howell - NOAA Federal
Subject: Lab findings and treatment priorities

Hello Stephen,

I hope you are doing well. It has been good to hear your voice on the debrief calls over the last few weeks.

I wanted to let you know that we (the communications team) are planning to begin sharing the lab results for J50 as they come in. We will of course do so only after the veterinary team has considered the results and the treatment priorities. Please let us know if you have any concerns.

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One question I have is, how does Contracaecum affect the animal? As we strive to translate the findings for the public, we would like to help them understand what this finding tells us about J50's condition, and how we plan to respond to that. Is there any concern about the treatment affecting another animal if the fecal sample turns out to be from a different animal than J50?

Thank you for all your hard work on this response.

Best,
Michael

--

Michael Milstein

Public Affairs Officer

NOAA Fisheries

West Coast Region<http://www.westcoast.fisheries.noaa.gov/>, Northwest Fisheries Science Center<http://www.nwfsc.noaa.gov/>, Southwest Fisheries Science Center<https://swfsc.noaa.gov/>

Office: 503-231-6268

Cell: [redacted]

[redacted]

[https://lh3.googleusercontent.com/H6MnkdnMfv4eUX0GhR2-SN83dAP1RxN0N_SRDwm95o_X2Vfwry9KuzzziZ3CFj3ZzJpcntkUS2ydNqWe9FyIscKNakMZMDENWjC07X5ao37H1iV51awX6yiU3oU]

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Michael Milstein

Public Affairs Officer

NOAA Fisheries

West Coast Region<http://www.westcoast.fisheries.noaa.gov/>, Northwest Fisheries Science Center<http://www.nwfsc.noaa.gov/>, Southwest Fisheries Science Center<https://swfsc.noaa.gov/>

Office: 503-231-6268

Cell [redacted]

[redacted]

[https://lh3.googleusercontent.com/H6MnkdnMfv4eUX0GhR2-SN83dAP1RxN0N_SRDwm95o_X2Vfwry9KuzzziZ3CFj3ZzJpcntkUS2ydNqWe9FyIscKNakMZMDENWjC07X5ao37H1iV51awX6yiU3oU]

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s.21(1)(a)

s.21(1)(b)

Khanna, Sukriti

From: Girouard, Louise
Sent: August-08-18 7:43 PM
To: Davis, Neil
Cc: Malikian, Janine
Subject: FW: For approval -- Revised Media lines RE: J50 - current status - comms
Attachments: ML_SRKW_J50 PAC region updates.docx

Sorry to bother you as this late hour but I was told there were some conversations today around the permitting and which act we would have to refer to. SARA or MMR

Can you please look at the following and let us know if this is accurate? - apologies if you have already commented - been a crazy day for all ☺

L

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s.21(1)(a)

s.21(1)(b)

DRAFT

Media Lines
Southern Resident Killer Whale J50

[redacted]

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21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

s.21(1)(a)
s.21(1)(b)
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Mbarushimana, Jenny

From: Jones, Lisa Ann
Sent: August-21-18 10:33 AM
To: Brekke, Heather
Subject: RE: notification email text for RKW aRS: for your review

Thanks!

From: Brekke, Heather
Sent: August-21-18 10:32 AM
To: Jones, Lisa Ann
Subject: RE: notification email text for RKW aRS: for your review

[redacted]

From: Jones, Lisa Ann
Sent: August-21-18 10:25 AM
To: Brekke, Heather
Subject: notification email text for RKW aRS: for your review

Hi Heather,

Here is the draft email text for the notification email. This is the standard text with some edits as per your suggestion.

[redacted]

s.21(1)(a)

s.21(1)(b)

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[redacted]

Species at Risk Program
Pacific Region
Fisheries and Oceans Canada
200-401 Burrard Street, Vancouver BC V6C 3S4
Telephone: 604-666-7907
Facsimile: 604-666-0417

s.21(1)(a)
s.21(1)(b)
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Wong, Eva

From: Jones, Lisa Ann
Sent: August-21-18 9:55 AM
To: Brekke, Heather
Subject: FW: RKW RS - minor wording udpate

FYI – here is the most recent link to the versions for proposed posting.

From: NCR Multimedia RCN (DFO/MPO)
Sent: August-17-18 8:14 AM
To: Chiu, Scott; NCR Multimedia RCN (DFO/MPO)
Cc: Jones, Lisa Ann
Subject: RE: RKW RS - minor wording udpate

Hi Scott,

I've made the changes below.

EN: https://canada-preview.adobecqms.net/en/environment-climate-change/services/species-risk-public-registry/recovery-strategies/northern-southern-killer-whales-2018-proposed-amended.html

FR: https://canada-preview.adobecqms.net/fr/environnement-changement-climatique/services/registre-public-especes-peril/programmes-retablissement/nord-sud-epaulard-2018-proposition-modifie.html

- Anthony

From: Chiu, Scott
Sent: August-17-18 9:08 AM
To: NCR Multimedia RCN (DFO/MPO)
Cc: Jones, Lisa Ann
Subject: RKW RS - minor wording udpate

We are adding a word to the captions of Fig. 4 and 5. Thank you.

003254

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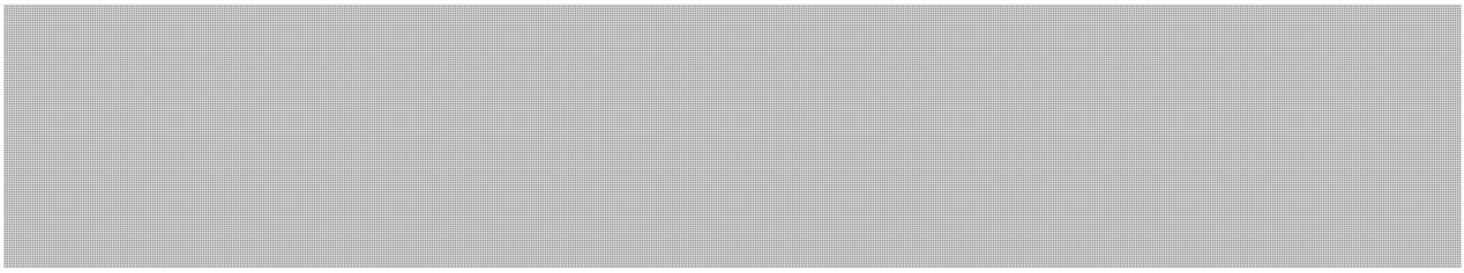

Scott Chiu
Biologist, Species at Risk Program Management / Espèces en péril
Fisheries and Oceans Canada / Pêches et Océans Canada
10W053, 200 rue Kent Street
Ottawa, Ontario
K1A OE6
E-mail / Courriel: Scott.Chiu@dfo-mpo.gc.ca
Téléphone: 613-295-8368

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Wong, Eva

From: Shaikh, Sharlene
Sent: August-21-18 11:25 AM
To: Brekke, Heather
Subject: FW: Nature Legacy project ideas - YAY team!
Attachments: Nature Legacy_SARA Marine team project proposals_March 2018.docx

Fyi these were the ideas we submitted for nature legacy a whle back

---

From: Jones, Lisa Ann
Sent: March-13-18 10:30 PM
To: McMillan, Christie; Shaikh, Sharlene; Wells, Caroline; Thompson, Undine; Govender, Rhona; Lee, Tatiana
Subject: Nature Legacy project ideas - YAY team!

Hi team,

First a huge thank you to all of you for the effort you put in to getting these project ideas together and regardless of whether they get further attention or not through this avenue, I think the effort put forward will be useful in general when we are thinking about work planning and what projects are needed.

I have attached the final version I sent to Jonathan after having received the project outlines from you and reviewing them.

Thanks again and fingers crossed for some project funding support!

Cheers
Lisa

Lisa Jones, PhD
A/Species at Risk Marine Team Lead
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

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69(1)(g) re: (e), 69(1)(g) re: (a)

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Dozie, Juachi

From: Brekke, Heather
Sent: August-21-18 9:06 AM
To: Webb, Cheryl
Subject: Responses from Province re RKW amended Recovery Strategy
Attachments: RKW_SARCC_comments_compiled_17JUL18.docx; 10 Jul 18 Horgan.pdf

Hi Cheryl,

Sorry for delay, I just got your voicemail now. Attached are the two responses we received from the province, including a letter from Premier Horgan as well as a comments table and our draft responses (follows our standard approach via SARCC).

Please let me know if you need anything else.

Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

REVIEW:

Name of Reviewer (Affiliation): The Province of British Columbia - Charlie Short (Ministry of Forest, Lands, Natural Resource Operations and Rural Development [FLNR]); Ron Ptolemy (Ministry of Environment and Climate Change Strategy [ENV)]); Karen Stefanyk (ENV); Ben Clark & Amber Mattock (Tourism Branch, Ministry of Tourism, Arts and Culture [TAC]); Stephen Ban (BC Parks, [ENV]); Alanya Smith (Ministry of Indigenous Relations and Reconciliation [MIRR]), Larry Neilson and Michael Turner on (on behalf of the Ministry of Agriculture [AGRI])

Date of Review: July 18, 2018

General Comments:

- B.C. commends the federal government for their efforts to address the destruction of critical habitat for RKW
- Consistent with our bilateral conversations through the Oceans Coordinating Committee (OCC) and the Regional Committee on Oceans Management (RCOM), and other BC/DFO venues, B.C. requests that the federal government continue to engage with us on initiatives related to Southern RKW and ensure the opportunity to provide feedback in a meaningful way is provided.
- The Province of British Columbia and its associated Ministries would like to stay informed regarding the research underway, so we can proactively work with our industry stakeholders and the public to anticipate any changes in operating procedures or regulations that may result from the research findings.

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review
SPECIFIC COMMENTS

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
Charles Short [FLNR]	s. 7	Cumulative impacts of activities that may affect critical habitat components are not discussed enough or at all – this is an important consideration given the amount current and historical impacts to KW habitat. a. Refinement of mitigation measures spatially would benefit from more comprehensive cumulative impacts type analyses.		
Charles Short [FLNR]	s. 7	Access to rubbing beaches are identified as a key function for NRKWs in identified critical habitat yet they can be discretely spatially identified – why not be more explicit on location. It seems that legal protection for identified sites with specific regulations would be most effective in these areas and could be implemented on a priority basis.		
Charles Short [FLNR]	s. 7	Prey availability is another element of critical habitat that is clearly a high priority although only fishing is explicitly identified as a threat. Would be more useful to itemize all activities that are detrimental to salmon habitat, population units / stocks, by species and area. Mitigation and protective measure would be more easily identified and implemented.		
Charles Short [FLNR]	s. 7	Limited identification of terrestrial impacts to critical aquatic habitat – unclear as to what the extent of potential impacts of implementing the recovery strategy would be in this regard (e.g., forestry, urban planning and effluent regulations, shoreline / coastal development, tourism)		
Charles Short [FLNR]	s. 7	Given that SRKW identified critical habitat is in the most impacted, heavily populated and intensely utilized marine environment in the province that all identified features, functions and attributes (except rubbing beaches) exist it may be useful to prioritize areas within to assist in implementation and mitigate impacts to socio-economic values that would be identified as impacting (i.e., destroying) aquatic critical habitat as defined.		
Ronald A. Ptolemy, R.P.Bio.	s 7	Last review by Ptolemy completed in 2008 with stated concerns over unknown weighting by stressor to the persistence of healthy populations. Table 6 (current draft) is a good start to identifying stressors but is incomplete and has no science		

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
		weighting as to what is really important to act on.		
Ronald A. Ptolemy, R.P.Bio.	s 7	There is no indication of the relative risk of various stressors between the Northern and Southern populations. For example if the Northern population is classed as healthier than the Southern population in terms of reproductive rate or mortality rate, both populations are subject to marine noise conditions so is under-water noise a common characteristic that is of lower concern for mitigative actions? Johnstone Strait is a very noisy place with many outboard motors operating as detected through hydrophones each year. Any noisier than Strait of Juan de Fuca or Puget Sound?		
Ronald A. Ptolemy, R.P.Bio.	s 7	If legal approach distances (200m) are the same during the busy summer months for both groups of Orca, is distance constraints a big issue?		
Ronald A. Ptolemy, R.P.Bio.	s 7	It seems autopsy reports of dead Orca from the Southern Population Group show high levels of toxins and contaminants more so than for Northern Population, why does Table 6 not address this important issue. Providing more forage fish (chinooks and chum) may not be a holistic solution.		
Ronald A. Ptolemy, R.P.Bio.		Is there a simple graphic that shows aerial frequency (use of drones) of poorly conditioned Orca differences between the two target groups? Could not find this information in the supplied material.		
Ronald A. Ptolemy, R.P.Bio	S 7	What efforts are being made to manage chinook fisheries to ensure sufficient spawner numbers are available to fill the freshwater capacity of rivers used by the salmon species for reproduction and rearing? This is not captured well in Table 6.		
AGRI	General	There are potential implications for the Province, specifically around environmental contaminants, nearshore use (planning, industrial development), tourism and recreational fishing and shipping/ports		

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
AGRI	General	AGRI has an interest in the RKW file from a commercial and recreational fisheries perspective. Chinook salmon are the primary food source for southern RKW's and recent recovery measures have led to reductions in fishing opportunities for that species.		
AGRI / ALL	General	As GOC goes forward with planning and implementation of measure to protect SRKW and chinook and chum as prey species, B.C. seeks a clear, and open and transparent consultation process with FN, stakeholders and the B.C.		
TAC	General	Because whale watching and sport fishing are tourism activities that fall under federal jurisdiction, there are limited management implications for the Province with respect to tourism specifically. Where the Province could play a proactive role is helping to promote responsible environmental guidelines and operating procedures in these industries. This aligns well with other work being done with the Adventure Tourism Coalition members with respect to heli-skiing and bear viewing. Many whale watching operators on the B.C. coast are part of the Pacific Whale Watch Association – here are their voluntary guidelines: https://www.pacificwhalewatchassociation.com/guidelines/	Low - FYI	
TAC	General – on-going communucations	[The BC Government] Tourism Branch would like to stay informed regarding the research underway, so we can proactively work with our industry stakeholders and the public to anticipate any changes in operating procedures or regulations that may result from the research findings.	Low - Communicatio n	
TAC	Socio-economic impact assessment	Southern Vancouver Island is a popular tourism destination for whale watching and restrictions could have economic impacts on the businesses operating within critical habitat areas. The 200 meter restriction will impact business operations and visitor experience – of which whale watching is a key motivating factor to trip planning in B.C.		
TAC		***Question:*** Are there opportunities for whale watching operators to get closer than 200 meters if they use alternate sources of power?		

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
BC Parks		**RE: Potential Management Implications in Robson Bight** 1) Even though it's a designated ecological reserve, the [P]rovince has no authority or enforcement powers to prevent vessels (powered or not) from entering the reserve. For this and other joint provincial-federal initiatives, having a Memorandum of Understanding (MoU) allowing provincial staff to enforce areas of federal jurisdiction would be a great step forward. [*The Province did note that there is a warden program in place that educates people in the area*]. 2) DFO itself continues to conduct test fisheries in and around the reserve waters, which at the very least looks terrible from a public relations standpoint even if it doesn't materially affect prey availability.		
Alanya Smith [MIRR]	General – First Nations Consultations	[In reviewing the amended recovery strategy and materials provided] there is no explicit mention of engagement that the federal government may have undertaken with Indigenous communities and governments with territories on the coast. B.C. is aware of the strong interests that coastal First Nations have in the health of the marine environment. In consideration of Canada and B.C.'s commitments to implement the UN Declaration on the Rights of Indigenous Peoples, B.C. encourages the federal government to undertake meaningful engagement with coastal First Nations in the development of the amended recovery strategy and in the communication of its final form and around its implementation.		

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BRITISH COLUMBIA

July 10, 2018

Honourable Dominic LeBlanc
Minister of Fisheries and Oceans Canada
200 Kent Street
Station 15N100
Ottawa, ON K1A 0E6

Sent via email: min@dfo-mpo-gc.ca

Dear Minister LeBlanc:

I am writing with respect to your department's recent decisions regarding Northern and Southern Resident Killer Whales in British Columbia and related Chinook salmon fisheries management. While I fully support federal efforts to recover these two iconic BC populations, your department's approach has been taking a toll on BC residents and coastal communities.

The process through which Pacific Region staff engaged with stakeholders over the recently enacted Southern Resident Killer Whale-related closure in the Strait of Juan de Fuca left many stakeholders questioning the value of engaging in such a process. The final closure will have a significant impact on tourism opportunities in the community of Sooke.

Following on the heels of this closure, Pacific Region initiated an external review of critical habitat for both Northern and Southern Resident Killer Whales. Many of our Indigenous, recreational and commercial stakeholders are currently engaged in peak-season operations of their fisheries-related businesses and traditional harvests. I'm sure you can appreciate that many of those stakeholders have little time to devote to a process that could impact them profoundly. Moreover, it appears that many of these stakeholders are one of the primary sources of reliable information about whale foraging and Chinook salmon abundance for the staff at Pacific Region.

British Columbians are deeply concerned about the state of our Southern Resident Killer Whales and are prepared to make sacrifices to protect this iconic population. Similarly, British Columbians are determined to conserve our wild salmon stocks and want to ensure they are available to Southern Resident Killer Whales, First Nations, recreational and commercial fishers

.../2

Office of the Premier

Web Site:
www.gov.bc.ca

Mailing Address:
PO Box 9041 Stn Prov Govt
Victoria BC V8W 9E1

Location:
Parliament Buildings
Victoria

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for generations to come. Unfortunately, it appears that Pacific Region is more focused on short-term fixes rather than on presenting a cohesive plan that will accomplish these goals over the long term. Indeed, the scientists Pacific Region assembled for the November 2017 workshop at the University of British Columbia uniformly agreed that in the absence of a cohesive plan to bolster Chinook stocks, addressing the foraging challenges facing Southern Resident Killer Whales would be incredibly difficult.

I strongly encourage your department to reconsider the timelines of its in-season consultation plan to provide stakeholders with the necessary opportunity to provide meaningful input and so your department can conduct the necessary scientific work to determine the full extent of Southern and Northern Resident Killer Whale critical habitat.

I hope you will find to time to meet with my colleague, the Honourable Lana Popham, Minister of Agriculture, in the near future, as she is coordinating the province's work on this critical file. I believe that if we work collaboratively, we can develop a strategy that will produce more fish for Southern Resident Killer Whales and stakeholders alike.

Sincerely,

John J. Horgan

John Horgan
Premier

cc: The Right Honourable Justin Trudeau, Prime Minister
Honourable Lana Popham, Minister of Agriculture

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Khanna, Sukriti

From: Sloan, Lara
Sent: August-21-18 1:47 PM
To: Cottrell, Paul; Thornton, Sheila
Subject: FW: Draft NOAA Fisheries article on DTAG research
Attachments: DraftDTAGarticle8-20-18.docx

Hi there. Do either of you have concerns/comments on this?
Questions we will be asked are: how much is DFO contributing (under a specific funding package?), and what staff are participating.
Also, do either of you have an update on the location of J pod, and possible dates for administering antibiotics and dewormer?
Thanks,
Lara

From: Michael Milstein - NOAA Federal [mailto
Sent: August-20-18 8:16 PM
To: Sloan, Lara; Girouard, Louise
Cc: Jim Milbury; Ruth Howell - NOAA Federal; Malikian, Janine
Subject: Draft NOAA Fisheries article on DTAG research

Hello colleagues,

I'm attaching our draft article about the upcoming DTAG research on killer whales that DFO is helping to pay for. (Thank you!)

Our researchers are reviewing this, but we welcome your feedback as well. We want to portray this research accurately on both sides of the border. Given the attention to J50, this is likely to attract broad interest.

Please feel free to share suggested edits or feedback.

Best,

Michael

--
Michael Milstein
Public Affairs Officer
NOAA Fisheries
West Coast Region, Northwest Fisheries Science Center, Southwest Fisheries Science Center
Office: 503-231-6268
Cell:

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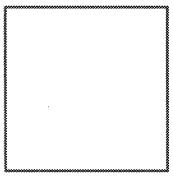
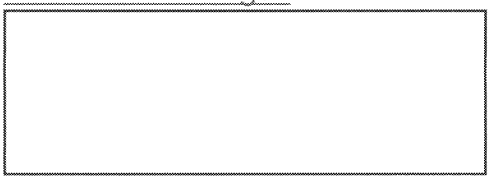


Find us online
www.nmfs.noaa.gov



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Nighttime research on endangered killer whales may help protect them from noise

August 2018

Next week researchers from NOAA Fisheries will begin studying the nighttime behavior of Southern Resident killer whales to better understand how much time they spend foraging and their use of sound, and to inform policies that might better protect the whales from vessel noise.

Underwater ship noise can disrupt the whales' use of echolocation, a series of rapid clicks, to detect, track and capture prey. That limits their foraging opportunities and forces them to expend extra energy at a time when they can least afford it.

Understanding whether the endangered whales forage at night, and how they use sound, might open the door to management actions that could reduce impacts on the whales. If they forage less at night, for example, that might be a time when large cargo ships could transit the area with less disturbance.

'If we can find out when they're foraging, and how they are using sound at night, we'll better understand when protection may be most important," said Marla Holt, a research scientist at NOAA Fisheries' Northwest Fisheries Science Center (NWFSC) and leader of the project.

Fisheries and Oceans Canada is largely funding the research, with NOAA Fisheries providing staff time and scientific expertise.

The study will use digital acoustic recording tags (DTAGs) attached with suction cups to the whales. Scientists will apply the tags to the whales with long poles. During previous tagging they typically saw the whales return to normal diving behavior within minutes. The tags usually remain on the whales for about one or two days until they fall off on their own.

"This is about as careful as we can be, with the least impact on the whales, that allows us to get the data that will inform decisions long-term," Holt said.

The Southern Resident killer whale population now numbers 75, its lowest point in close to three decades. NOAA Fisheries is carrying out an action plan of priority steps to address the three main threats to the whales: vessel traffic and noise, availability of prey, and chemical pollution and contaminants. The latest research informs those efforts.

While researchers have extensively studied Southern Resident behavior during the day, they have limited data on the whales at night. The DTAGs record sound, and the whales'

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movements, which reveal whether they are actively foraging, and at what times, researchers said.

Shipping traffic through the Salish Sea, the heart of the whales' range, has increased in recent years, and is projected to increase further. Authorities in Canada and the United States are considering options for managing the shipping traffic to reduce impacts on the killer whales, which are also protected in Canada.

FOR MORE INFORMATION:

Killer whale DTAG research at NWFSC
https://www.nwfsc.noaa.gov/research/divisions/cb/ecosystem/marinemammal/dtags.cfm

Southern Resident killer whales
http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/

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Khanna, Sukriti

From: Jenkins, Randy
Sent: August-21-18 3:15 PM
To: Cottrell, Paul; Davis, Neil
Subject: Re: SRKW J-50

Thanks

I will past along the clarification

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 18:11
To: Davis, Neil
Cc: Jenkins, Randy
Subject: Re: SRKW J-50

Hi Neil,
The conditions are very poor for veiwing on the water. Just clarified things with Sheila and NOAA. J-pod was seen on Saturday heading west. J-50 was seen at that time by NOAA. Brian Gisborne was on water on Sunday in poor conditions and saw K and L pod and some J's and did not see J50. Due to the conditions it was almost certainly an incomplete count. J50 is known for straying away from the group so not unusual. No sightings yesterday and today as the viewing conditions are very poor. That is the latest I have. There is only a couple 100 meters of visability due to the smoke/fog. Hope this is useful.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Davis, Neil
Sent: Tuesday, August 21, 2018 2:46 PM
To: Cottrell, Paul
Subject: Fw: SRKW J-50

Can you assist?

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Sent: Tuesday, August 21, 2018 2:16 PM
To: Davis, Neil; Harber, Lee
Cc: Scott, Paul G; Moore, Kendra
Subject: SRKW J-50

Can someone please confirm the information below (*J50 not sighted past couple days but her mother and others sighted multiple times*)... the last update I had was that J pod was sighted on August 19th. Is it the case that J50 is no longer with the Pod??

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I had only earlier this afternoon advised that there wasn't anything new to report today on SRKW and then Science sends this message below to the acting ADM FHM who is now asking for details and whether he should send the DM a heads up on this. Any info would be appreciated.

Thanks.

Randy

From: Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Sent: Tuesday, August 21, 2018 3:52 PM
To: Landry, Jean; Nadeau, Simon
Cc: Moore, Wayne; Kennedy, Eddy
Subject: Getting ready.....

Two items wrt SRKW J-50:
Please be advised that J50 – the emaciated SRKW – has not been seen for a couple of days now. While way too soon to speculate on possible significance this is noteworthy given that her mother and other pod members have been observed multiple times during this period. There is significant presence on the water and we will advise if there is a update.

Also, FM has submitted an anticipatory request for science advice based on the recent lab analysis results that indicated feces collected from some (unknown) members of the J-Pod contained a parasite and that, as a consequence, NOAA may submit a request for a license amendment to administer parasite treatment in Canadian waters to J50 (if the whale is observed).

Science has begun preliminary work to address both of these issues.

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
Carmel.Lowe@dfo-mpo.gc.ca
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Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

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Khanna, Sukriti

From: Davis, Neil
Sent: August-21-18 3:13 PM
To: Cottrell, Paul
Cc: Jenkins, Randy; Harber, Lee
Subject: RE: SRKW J-50

Thank you Paul

From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 3:12 PM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Subject: Re: SRKW J-50

Hi Neil,
The conditions are very poor for veiwing on the water. Just clarified things with Sheila and NOAA. J-pod was seen on Saturday heading west. J-50 was seen at that time by NOAA. Brian Gisborne was on water on Sunday in poor conditions and saw K and L pod and some J's and did not see J50. Due to the conditions it was almost certainly an incomplete count. J50 is known for straying away from the group so not unusual. No sightings yesterday and today as the viewing conditions are very poor. That is the latest I have. There is only a couple 100 meters of visability due to the smoke/fog. Hope this is useful.
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To: Cottrell, Paul
Subject: Fw: SRKW J-50

Can you assist?

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Cc: Scott, Paul G; Moore, Kendra
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Thanks.

Randy

From: Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Sent: Tuesday, August 21, 2018 3:52 PM
To: Landry, Jean; Nadeau, Simon
Cc: Moore, Wayne; Kennedy, Eddy
Subject: Getting ready.....

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Science has begun preliminary work to address both of these issues.

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-21-18 3:28 PM
To: Moore, Kendra
Subject: Fw: SRKW J-50

Hi Kendra,
So you have the latest.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Tuesday, August 21, 2018 3:14 PM
To: Davis, Neil
Cc: Jenkins, Randy
Subject: Re: SRKW J-50

The animals are in an isolated area on the West Coast of Vancouver Island near Swiftsure Bank. Hopefully this gives you some context.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 3:11 PM
To: Davis, Neil
Cc: Jenkins, Randy
Subject: Re: SRKW J-50

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Sent: Tuesday, August 21, 2018 2:46 PM
To: Cottrell, Paul
Subject: Fw: SRKW J-50

Can you assist?

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Sent: Tuesday, August 21, 2018 2:16 PM
To: Davis, Neil; Harber, Lee
Cc: Scott, Paul G; Moore, Kendra
Subject: SRKW J-50

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Thanks.

Randy

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To: Landry, Jean; Nadeau, Simon
Cc: Moore, Wayne; Kennedy, Eddy
Subject: Getting ready.....

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Carmel

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Fisheries and Oceans Canada | Pêches et Océans Canada
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Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

s.69(1)(g) re: (a)
s.69(1)(g) re: (e)
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Khanna, Sukriti

From: Davis, Neil
Sent: August-21-18 11:00 AM
To: Barton, Meagan
Subject: RE: SRKW [redacted]

Tomorrow at 830 can work

From: Barton, Meagan
Sent: Tuesday, August 21, 2018 10:35 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: RE: SRKW [redacted]

We could do 830 tomorrow? Or the week of September 4th …

Andy might be going to the Island Thursday afternoon and Friday day, so those two days are temporarily not doable, although it could change.

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Davis, Neil
Sent: August-20-18 10:51 PM
To: Barton, Meagan
Subject: Re: SRKW [redacted]

We can do w 1/2 hr if it makes scheduling easier

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Davis, Neil
Sent: Monday, August 20, 2018 4:26 PM
To: Barton, Meagan
Cc: Thomson, Andrew
Subject: SRKW [redacted]

Hi Meagan

Can you look for 45 mins ideally for me, Cheryl, Andy, and Carmel to discuss [redacted] Many of my mtgs this week can be rescheduled if we need to find time, but I'm not here Thu. Sukriti can help w figuring out what can be rescheduled if necessary

Neil Davis
Director, Resource Management

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Fisheries and Oceans Canada | Government of Canada
Neil.Davis@dfo-mpo.gc.ca | Tel: (604) 666-0115

Directeur, Gestion des Ressources
Pêches et Océans Canada | Gouvernement of Canada
Neil.Davis@dfo-mpo.gc.ca | Tel: (604) 666-0115

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

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Khanna, Sukriti

From: Davis, Neil
Sent: August-21-18 3:25 PM
To: Lowe, Carmel; Thomson, Andrew; Webb, Cheryl
Subject: RE: SRKW

Hi Carmel,

The intent of tomorrow's meeting is to

- Provide an overview of what is happening around this to catch everyone up
- Flag what we may need from science, FM, EMB, maybe others
- Discuss timelines and plan for completing regional input to the doc

Cheryl, pls add anything else I've missed

Thx
Neil

From: Lowe, Carmel
Sent: Tuesday, August 21, 2018 3:06 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Subject: RE: SRKW

Andy – thanks for sharing this – I think? Not sure how much I will be able to contribute or to what? but this is first time I am seeing it/have no clue who is leading – what is being led – timelines for input, etc.

Assume you have shared it with me because there are/will be implications for Science?
Talk tomorrow ….

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

-----Original Appointment-----
From: Barton, Meagan **On Behalf Of** Thomson, Andrew
Sent: August 21, 2018 2:31 PM
To: Davis, Neil; Webb, Cheryl; Lowe, Carmel
Subject: SRKW
When: August 22, 2018 8:30 AM-9:00 AM (UTC-08:00) Pacific Time (US & Canada).
Where: Killer Whale 1-877-413-4781 ID: 7164844

s.21(1)(a)
s.21(1)(b)
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Dozie, Juachi

From: Jenkins, Randy
Sent: August-21-18 2:46 PM
To: Davis, Neil; Harber, Lee
Cc: Scott, Paul G; Moore, Kendra
Subject: RE: SRKW J-50

FYI...

From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 1:16 PM
To: Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>
Subject: RE: SRKW Update

Hi Kendra,
No updates yet today on J-pod as there have been no sightings as the animals are believed to be offshore the West Coast of Vancouver Island. Nothing yet from NOAA.
Cheers,
Paul

From: Jenkins, Randy
Sent: Tuesday, August 21, 2018 5:16 PM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Cc: Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>
Subject: SRKW J-50

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Thanks.

Randy

From: Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Sent: Tuesday, August 21, 2018 3:52 PM
To: Landry, Jean; Nadeau, Simon
Cc: Moore, Wayne; Kennedy, Eddy
Subject: Getting ready.....

Two items wrt SRKW J-50:
Please be advised that J50 – the emaciated SRKW – has not been seen for a couple of days now. While way too soon to speculate on possible significance this is noteworthy given that her mother and other pod members have been

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observed multiple times during this period. There is significant presence on the water and we will advise if there is a update.

Also, FM has submitted an anticipatory request for science advice based on the recent lab analysis results that indicated feces collected from some (unknown) members of the J-Pod contained a parasite and that, as a consequence, NOAA may submit a request for a license amendment to administer parasite treatment in Canadian waters to J50 (if the whale is observed).

Science has begun preliminary work to address both of these issues.

Carmel
Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

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Khanna, Sukriti

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: August-21-18 11:53 AM
To: Davis, Neil
Cc: Khanna, Sukriti
Subject: Draft_Reply_2018-501-00101_[redacted]docx
Attachments: MECTS-#3952730-v2-Draft_Reply_2018-501-00101_[redacted]docx; 2406_001.pdf

Hi Neil,

We're looking for your approval on this draft response **by noon Wednesday, but sooner if at all possible.**

Please use track changes to insert any necessary edits in the attached document, and FORWARD the document to XPAC PRMCU.

Your review should also include technical accuracy and consistency with policy direction.

If you think someone else in Pacific Region or in Legal Services must approve and they aren't on our approval list, **please advise us ASAP and we will forward the documents for their approval**.

Thanks,

Heather

****Please direct all e-mails regarding ministerial correspondence to XPAC PRMCU.****

Candace McGuire, Heather Fowlie and Alison Jacques

Manager, Pacific Region Ministerial Correspondence Unit
Fisheries and Oceans Canada/Government of Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

Gestionnaires de la correspondance ministériel
Pêches et Océans Canada/Gouvernement du Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823

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21(1)(b), 21(1)(a)

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s.19(1)

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Rakkar, Jasmine

From: Johal, Sharan on behalf of Reid, Rebecca
Sent: August-14-18 8:05 AM
To: Rakkar, Jasmine
Subject: [redacted] fishing closure in victoria bc

[redacted] for a response please.

Cara Fogliato for Sharan Johal
Executive Assistant to the Regional Director General/ Assistant Exécutif au Directrice Général Régional
Tel: 604-666-1376/Fax: 604-666-8956

From: [redacted]
Sent: August-12-18 11:50 PM
To: Reid, Rebecca
Subject: fishing closure in victoria bc

Hello there , you guys are closing down sport fishing , that's not right. Go look a a video called salmon confidential??? No more fish farms ? Back east they sell seal meat to many seals? Please don't punish sport fishing! I have fished at port Renfrew 90% and beecher bay10% for 25years fish are getting smaller. Hope you can hear me [redacted] [redacted]nome number thanks for reading my concerns regards [redacted]

2018-501-00101 [redacted] Aug 29 # 3952730

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Malikian, Janine
Sent: August-21-18 11:36 AM
To: Davis, Neil
Subject: For review: Updated media lines/Qs and As - RKW proposed amended Recovery Strategy
Attachments: FW: Lateral displacement trial starts Monday August 20th; QA_AmendedRecoveryStrategy_RKW_Update.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Neil,

Looking for your review on the attached updated lines for the RKW proposed amended recovery Strategy. ETA for posting is still this Friday as far as I know.

Not many updates, but I've highlighted most, and

Thanks,

Janine

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Khanna, Sukriti

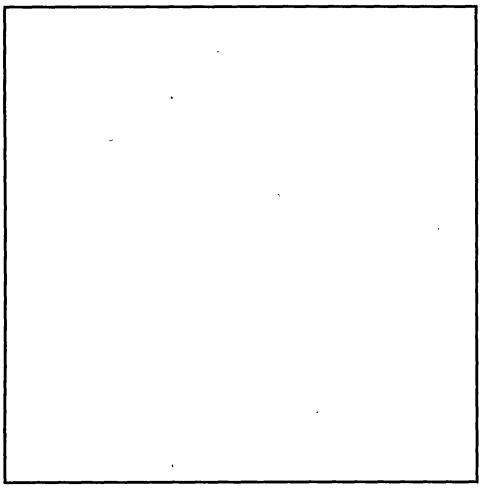
From: Malikian, Janine
Sent: August-21-18 11:23 AM
To: Malikian, Janine
Subject: FW: Lateral displacement trial starts Monday August 20th

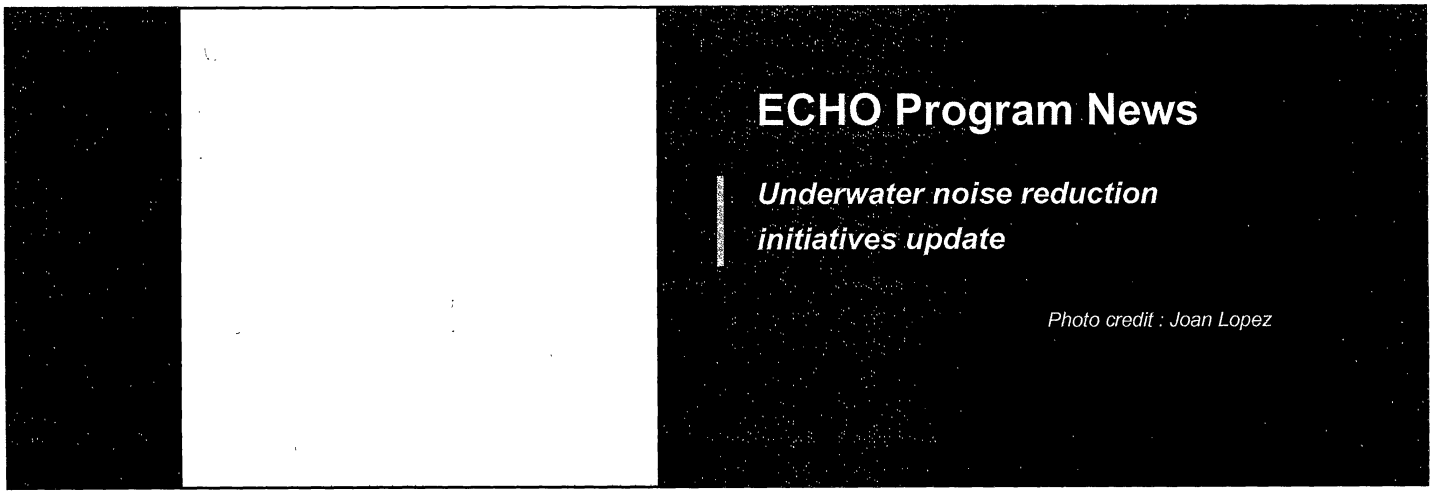
---

From: ECHO Program [mailto:ECHO@portvancouver.com]
Sent: August-15-18 7:00 AM
To: Brekke, Heather
Subject: Lateral displacement trial starts Monday August 20th

Slowdown participation rates continue to increase!

No Images? Click here





Strait of Juan de Fuca lateral displacement trial

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begins Monday

A quick reminder that the Strait of Juan de Fuca voluntary lateral displacement trial will start on **Monday August 20, 2018.** The purpose of the trial is to help reduce vessel noise in key southern resident killer whale feeding areas along the southern shore of Vancouver Island. The trial will remain active until October 31, 2018.

If it is safe and operationally feasible to do so, all **deep-sea vessels** transiting outbound through the Strait of Juan de Fuca are requested to navigate as far south as possible within the outbound lane of the traffic separation scheme (without entering the separation zone), in the area between 124' west and 124' 40" west, over a distance of approximately 34 nm. Vessels entering the lane from the Victoria pilot station should do so using the cut to remain on the north side of lane as they enter, then shift to the south when safe to do so.

Between these same longitudes, all **vessels transiting the inshore zone** are requested to navigate as far south from Vancouver Island as possible without entering the traffic separation scheme.

For more details, please review the Strait of Juan de Fuca trial backgrounder. Specific materials for deep-sea and inshore vessels can also be found on our website.

Deep sea traffic cheat sheet
Deep sea traffic instructional postcard
Inshore traffic cheat sheet
Inshore traffic instructional postcard

Haro Strait Vessel Slowdown

Week 4 pilot reported participation rate: 91%

Between August 3 and 9, the fourth week of the Haro Strait voluntary slowdown, agents flagged 85 of 93 transits as potential candidates for participation. All 85 of those vessel transits were reported to have participated, representing a total participation rate of 91%, up 4% over last week. Thank you for maintaining and continuing to improve these high participation rates!

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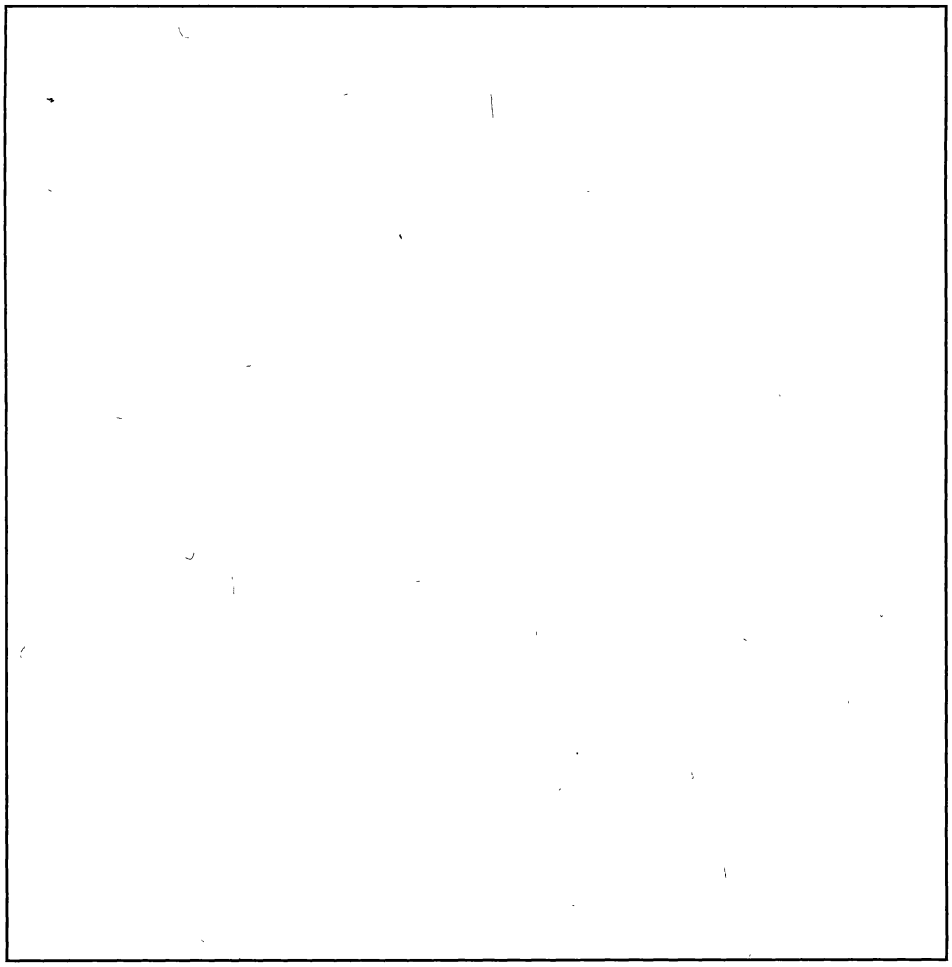

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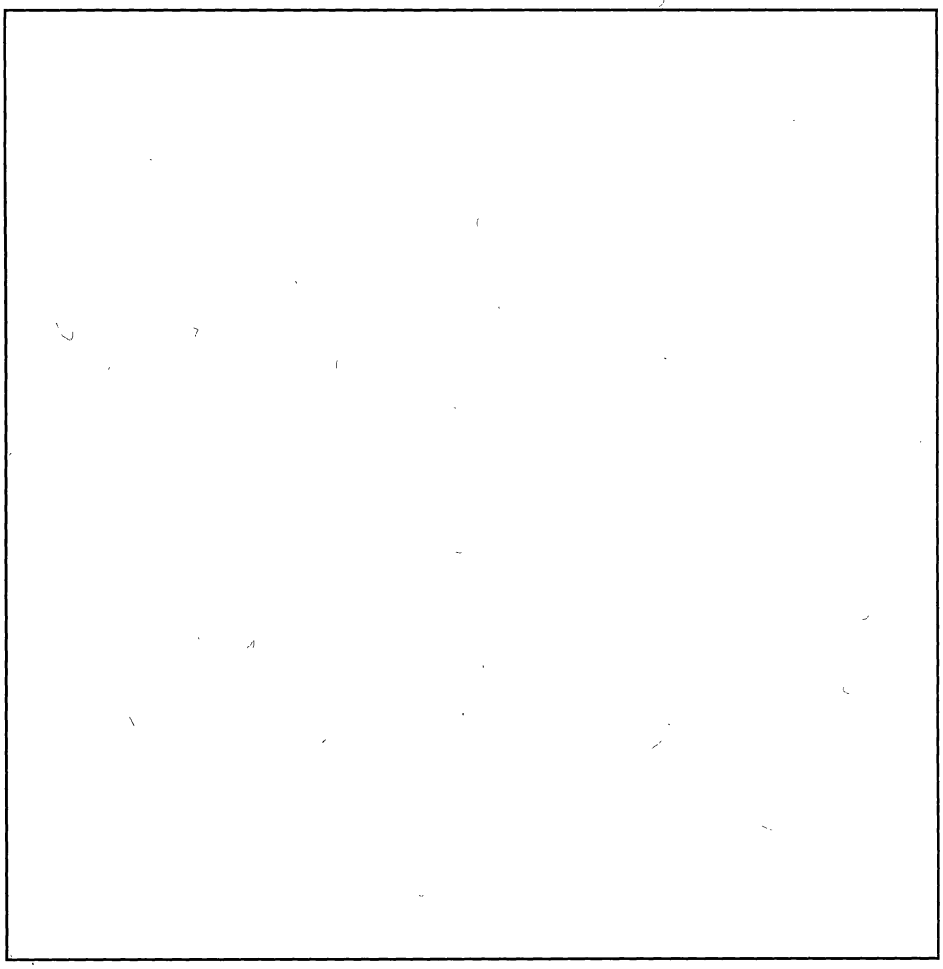

PLEASE NOTE: Participation rates shown are based on reporting to Pacific Pilotage Authority dispatch following each transit. AIS data will be used later to confirm transit speeds.

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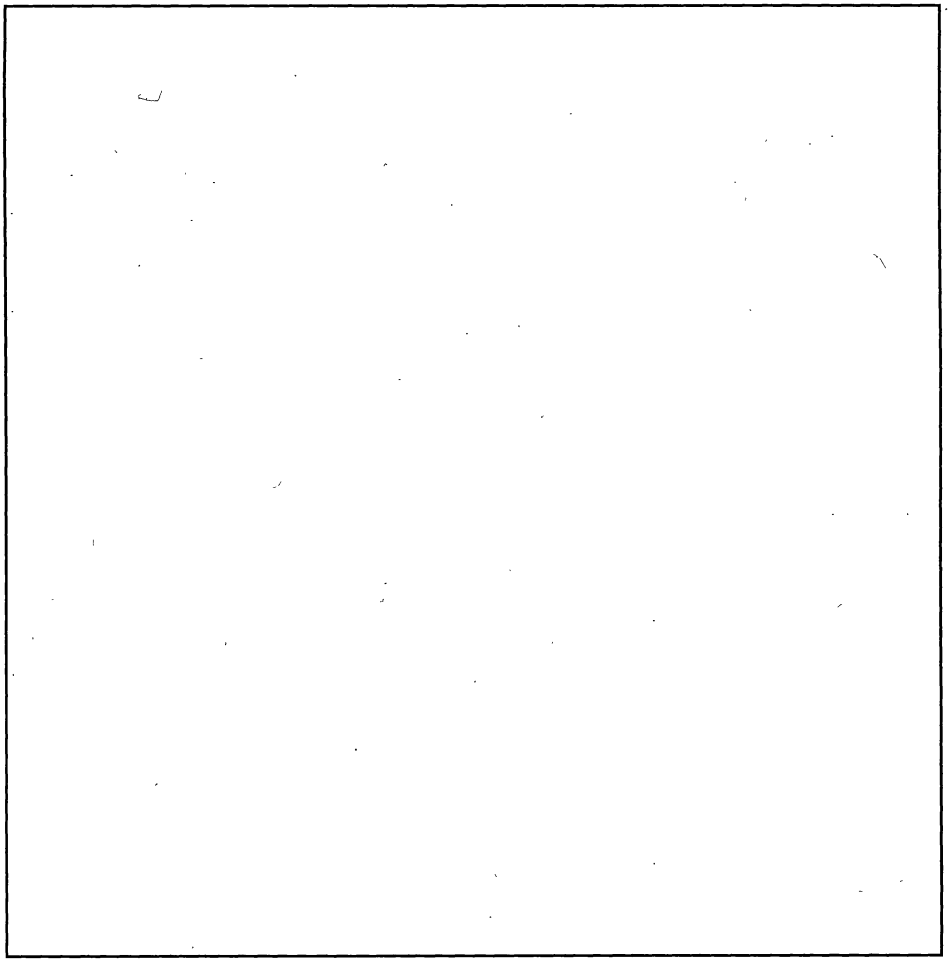

Washington State Ferries also slowing down

Since late June 2018, Washington State Ferries has been consistently slowing its vessels from 16 knots to 11 knots as it transits through the Haro Strait shipping channel during its two daily crossings to Sidney, B.C. Thank you, Washington State Ferries for slowing down for the whales!

Whale whereabouts

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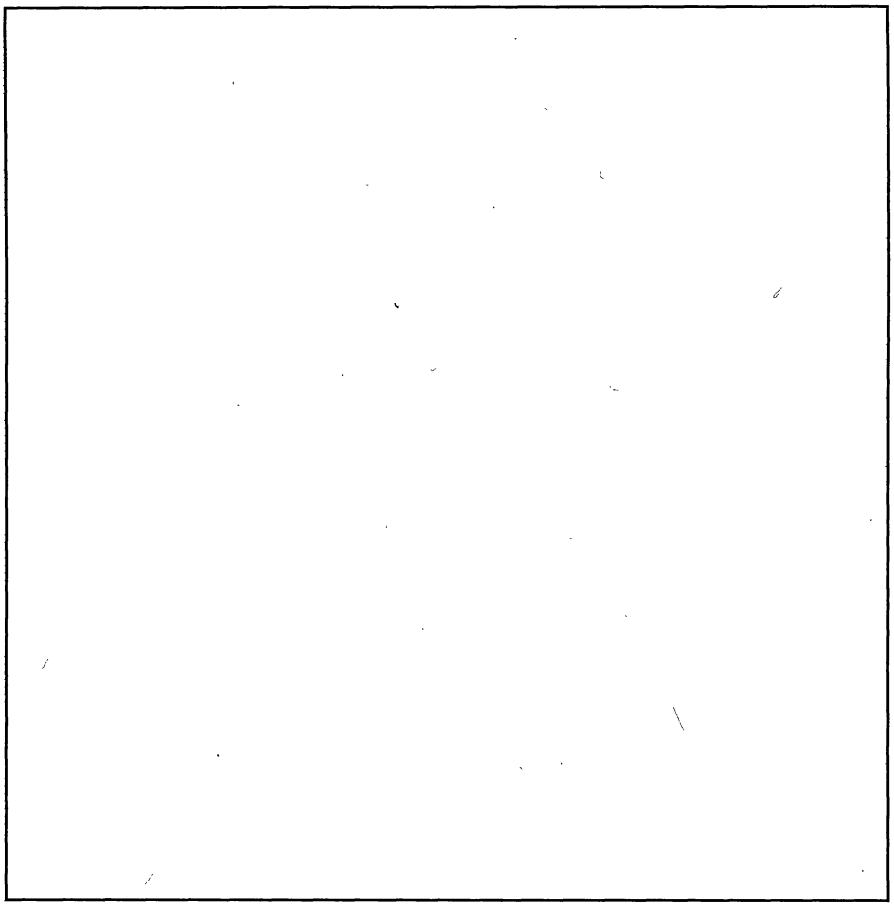

Southern resident killer whales were not detected in the Salish Sea in the earlier part of Week 4. However, they were detected in the Strait of Juan de Fuca for four days towards the latter part of the week, returning back to Haro Strait on August 9. Above is a recent photo of *MSC Silvia* slowing down in the presence of a southern resident killer whale. Many thanks to Mediterranean Shipping Company for participating in the slowdown! *Photo credit: Jeanne Hyde*

Questions? Review our webpage, email echo@portvancouver.com or call the 24/7 Operations Centre at 604.665.9086

If this email was forwarded to you, sign up here to get updates directly.

CORRECTION NOTICE: *In last week's newsletter, the whale in the photo was Cappuccino K21, not Tahlequah J35.*

For more information about and resources for the Haro Strait slowdown, please keep an eye on the **webpage.** If you have been forwarded this newsletter and would like to receive regular updates click here.

If you have specific questions, please email echo@portvancouver.com.

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Learn more at portvancouver.com/echo

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Vancouver Fraser Port Authority
100 The Pointe, 999 Canada Place
Vancouver, B.C. V6C 3T4

You are receiving this email because of your interest and/or participation in the voluntary vessel noise reduction initiatives taking place this summer. These initiatives aim to reduce underwater noise which effects endangered killer whales.

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Wong, Eva

From: Jones, Lisa Ann
Sent: August-22-18 3:14 PM
To: Brekke, Heather
Subject: FW: Final RKW RS Social Media Messaging
Attachments: SM plan - RKW recovery strategy_ap_SMM.DOCX

For the NHQ social media plan please see attached. Janine has confirmed that the region will re-tweet and FB message following NHQ lead.

Overall it boils down to:
1. tweet and FB post at launch
2. tweet and FB post 1/2 way through (~4 weeks in; ~Sept 24th) 3. tweet and FB post 1 week prior to close (~Oct 19th)

Cheers
Lisa

-----Original Message-----
From: Payne, Matthew
Sent: August-22-18 11:04 AM
To: Chiu, Scott; Jones, Lisa Ann
Subject: RE: Final RKW RS Social Media Messaging

Hi Lisa

Please find attached the final version of the Social Media Plan for RKW Recovery Strategy.

Thanks
Matt

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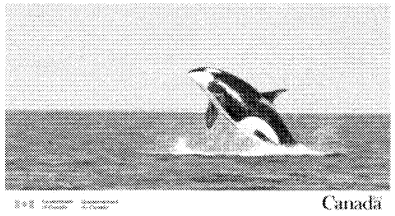
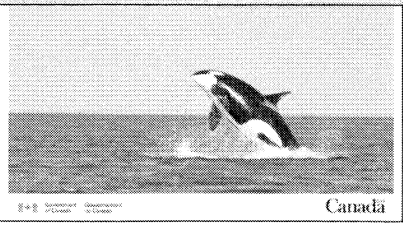
DFO SOCIAL MEDIA CALENDAR / CALENDRIER DE MÉDIAS SOCIAUX DU MPO

Amended Recovery Strategy for Northern and Southern Resident Killer Whales

#	Timing / Temps	Channel / Canal	English Message	Message en français	Visuals / Graphiques	Region / Région	Tag / Share	Comments / Commentaires
Friday, August 17 (TBC) – Launch of public consultation period								
		Twitter	We are committed to the protection and recovery of Southern Resident and Northern Resident Killer Whales, and are proposing new critical habitat to protect these at risk species. Find out more and have your say:					
		Facebook	We are committed to the protection and recovery of Southern Resident and Northern Resident Killer Whales. We are proposing new critical habitat to protect these at risk species. Find out more and have your say:					
4 weeks later (half way through consultation period)								
		Twitter	Southern Resident and Northern Resident Killer Whales are at risk and need our help. We've proposed new critical habitat to help protect them, and we want					

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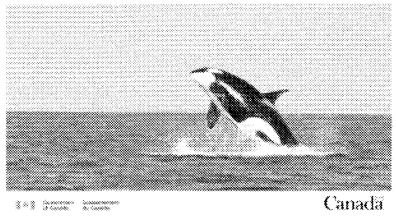
#	Timing / Temps	Channel / Canal	English Message	Message en français	Visuals / Graphiques	Region / Région	Tag / Share	Comments / Commentaires
			your feedback. Find out more:					
1 week before the consultation period closes								
		Twitter	Just one week left to let us know what you think about our proposed amendment to the recovery strategy for Southern and Northern Resident Killer Whales. Don't miss your chance to have your say:					

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Khanna, Sukriti

From: Greene, Annely
Sent: August-22-18 4:13 PM
To: Cottrell, Paul
Subject: 2018-39(1) NOAA Section 38 Authorization Amendment Aug 22 2018 DRAFT
Attachments: 2018- 39(1) NOAA_SECTION_38_AUTHORIZATION Amendment Aug 22 1018 Draft.doc

Hi, here is a first draft of the document. I have made some formatting changes in an effort to condense the document and ease of reading and added page numbers. As it is getting rather lengthy does the document have to be in all capitals? You will see in track changes a few other edits. Anyways it can all be returned to the original format if you want. Science has given their approval so I guess we are waiting on what else Stephen has to say and answers to some of his comments on initial review of the new methodology. Hopefully this can all be done tomorrow. A

Annely Greene
Marine Mammal Program Officer
Fisheries & Oceans Canada
Suite 200 - 401 Burrard Street
Vancouver, B.C. V6C 3S4
Telephone: 604-666-0071
Annely.Greene@dfo-mpo.gc.ca

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s.19(1)

Khanna, Sukriti

From: Teri Rowles - NOAA Federal [redacted]
Sent: August-23-18 9:52 AM
To: Cottrell, Paul
Cc: Greene, Annely; Lynne Barre - NOAA Federal
Subject: Re: SARA license application
Attachments: imagejpeg_0 collared needles.jpg

Paul, we are working on addressing your questions. In the meantime here is an image of the needles that are used with the dart gun. They are side port, either smooth for total length (second one from left), collared (rest of the needles in image) or barbed. We are not going to use the barbed needles but might need to use the collared needles. I should have responses after we finish the veterinary call.

On another question, we have a harbor seal/gray seal die-off on the east coast US (Maine, New Hampshire, Massachusetts) with both influenza and phocine distemper positive animals. Have you heard of any increase in seals in Arctic or east coast?

On Thu, Aug 23, 2018 at 11:39 AM, Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca> wrote:

Hi Teri

A couple of questions for you. We are not familiar with the collared syringes, could a picture or image (with scale) be sent with measurements as to the length of the flanges or barbs and whether the collared syringes will be sterilized/disinfected prior to use. How will the injection sites be recorded and evaluated over time to assess any adverse reaction or tissue injury? Will there be videography and photos at the time of injection and will those photos and video be available to DFO to review the tag wound site?

Thanks so much,

Paul

From: Teri Rowles - NOAA Federal [mailto:[redacted]
Sent: August-22-18 11:00 AM
To: Lynne Barre - NOAA Federal
Cc: Cottrell, Paul; Thornton, Sheila; Greene, Annely; Deborah Fauquier - NOAA Affiliate; Brad Hanson; Sarah Wilkin; Candice Emmons; Kristin Wilkinson
Subject: Re: SARA license application

Paul, Enclosed is the amendment to the SARA license for response to J50. As Kristin discussed with you we have added an anthelminic (anti-parasitic) to the treatment regime based on the fecal sample results identifying *contracaecum* parasites and have added the potential use of a collared needle for the dart. Please let us know if there are any questions.

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THANK YOU

On Thu, Aug 9, 2018 at 3:40 PM, Lynne Barre - NOAA Federal [redacted] wrote:

Hi Paul,

Attached is the completed SARA license application form along with the application document submitted yesterday. I've also attached documentation of Animal Care Committee compliance for the activities approved under the US NMFS Permit No. 18786-03.

I believe that Brad Hanson has already applied for foreign vessel clearance, but am awaiting confirmation. I can send along a photo of the vessel as soon as I get one from the team.

Please let us know if you need anything else and please provide confirmation that work can proceed in Canadian waters or a copy of the license or as soon as it is available.

Thanks,

Lynne

s.19(1)

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Khanna, Sukriti

From: Teri Rowles - NOAA Federal <[redacted]>
Sent: August-22-18 11:04 AM
To: Cottrell, Paul
Cc: Lynne Barre - NOAA Federal; Thornton, Sheila; Greene, Annely; Deborah Fauquier - NOAA Affiliate; Brad Hanson; Sarah Wilkin; Candice Emmons; Kristin Wilkinson
Subject: Re: SARA license application

Great and thank you again!

[redacted]

On Aug 22, 2018, at 2:02 PM, Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca> wrote:

> Thanks so much Teri! I'll get going on the licence amendment and will contact you if there are any questions.
> Best,
> Paul
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
>
> **From:** Teri Rowles - NOAA Federal
> **Sent:** Wednesday, August 22, 2018 10:59 AM
> **To:** Lynne Barre - NOAA Federal
> **Cc:** Cottrell, Paul; Thornton, Sheila; Greene, Annely; Deborah Fauquier - NOAA Affiliate; Brad Hanson; Sarah Wilkin; Candice Emmons; Kristin Wilkinson
> **Subject:** Re: SARA license application
>
> Paul, Enclosed is the amendment to the SARA license for response to J50. As Kristin discussed with you we have added an anthelminic (anti-parasitic) to the treatment regime based on the fecal sample results identifying *contracaecum* parasites and have added the potential use of a collared needle for the dart. Please let us know if there are any questions.
>
> THANK YOU
>
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>
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> Thanks,

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Lynne

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Khanna, Sukriti

From: Greene, Annely
Sent: August-22-18 11:12 AM
To: Cottrell, Paul
Subject: RE: SARA License application J50 Amendment

I saw it came in and was wondering on next steps. I will start on the amendment. A

From: Cottrell, Paul
Sent: August-22-18 11:10 AM
To: Davis, Neil; Thomson, Andrew; Kennedy, Eddy; Thornton, Sheila; MacConnachie, Sean; Sloan, Lara; Girouard, Louise; Greene, Annely; Cauffope, Genevieve; Webb, Cheryl; Doniol-Valcroze, Thomas
Cc: Moore, Kendra; Jenkins, Randy
Subject: Fw: SARA license application

Hi All,
Application from NOAA to administer anti parasitic compound and utilize a different dart to administer medication to J50 is attached. If MM science can please review and provide any feedback it would be very much appreciated. We are also going to have Dr Raverty (Provincial expert MM veterinarian) review the application and provide comments. Annely and I will draft up the amended letter of authorization once feedback received for Andy's signature.
Best,
Paul
Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Teri Rowles - NOAA Federal [redacted]
Sent: Wednesday, August 22, 2018 10:59 AM
To: Lynne Barre - NOAA Federal
Cc: Cottrell, Paul; Thornton, Sheila; Greene, Annely; Deborah Fauquier - NOAA Affiliate; Brad Hanson; Sarah Wilkin; Candice Emmons; Kristin Wilkinson
Subject: Re: SARA license application

Paul, Enclosed is the amendment to the SARA license for response to J50. As Kristin discussed with you we have added an anthelminic (anti-parasitic) to the treatment regime based on the fecal sample results identifying *contracaecum* parasites and have added the potential use of a collared needle for the dart. Please let us know if there are any questions.

THANK YOU

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I believe that Brad Hanson has already applied for foreign vessel clearance, but am awaiting confirmation. I can send along a photo of the vessel as soon as I get one from the team.

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Please let us know if you need anything else and please provide confirmation that work can proceed in Canadian waters or a copy of the license or as soon as it is available.
Thanks,
Lynne

No information has been removed or severed from this page

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Jenkins, Randy
Sent: August-22-18 11:03 AM
To: Cottrell, Paul; Davis, Neil; Harber, Lee
Cc: Moore, Kendra; Scott, Paul G
Subject: RE: SRKW J-50

Thank you Paul... good news indeed that J50 is back intehfold

---

From: Cottrell, Paul
Sent: Wednesday, August 22, 2018 11:48 AM
To: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Cc: Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>
Subject: Re: SRKW J-50

Thanks Randy,
As an update, just received information from DFO contractor working off the West Coast of Vancouver Island (ie through DFO science) that J50 was seen with mom last night at 6:45 PM off Carmanah Point traveling toward Nitinat. It was a super pod so, J, K and L pods were all present. J16 mom was observed foraging and close with J50.
When are we hiring for the hubs and getting new staff in place as it is much needed asap. I hope this is a priority action. The summer is going fast...
As I mentioned, updates from all the potential sources of information (eg whale watch industry, NOAA, DFO CP, DFO RM, DFO science, NGO's, Straitwatch, researchers, commercial vessels, cetacean sightings network, etc) are not always real time and sometimes the information is received next day. It is a big ocean out here and with the fog/smoke it has made locating whales when offshore very difficult. The trans-boundary nature of the movements further complicates things. Often only a small portion of a SRKW pod are seen (ie not all members of a pod are observed). This includes J50 and J35. Hope this is useful context.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Jenkins, Randy
Sent: Wednesday, August 22, 2018 6:44 AM
To: Cottrell, Paul; Davis, Neil; Harber, Lee
Cc: Moore, Kendra; Scott, Paul G
Subject: RE: SRKW J-50

Yes it would be useful for us if the daily info we receive included any and all updates/information/plans from RM, C&P, science, NOAA and anyone else connected to SRKW so that a complete summary can be presented on what the latest information... consolidation and compilation of relevant whale information is something we would envision as a role for the "HUBS" in the future (on both coasts)... for the short term would it be helpful if Kendra developed a short checklist/template where we could capture updates from the various players?

Thanks.
Randy

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From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 6:35 PM
To: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: Re: SRKW J-50

Very good point, probably best to have one point source from region to you guys to prevent confusion.

Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Jenkins, Randy
Sent: Tuesday, August 21, 2018 3:26 PM
To: Cottrell, Paul; Davis, Neil
Subject: Re: SRKW J-50

Thanks again,,, I have advised up with your context and that it may be premature to read into lack of J50 sighting.

Very important that we try and have consistent messaging coming into the center. Be useful if Science would advise or collaborate on messaging they are sending to HQ esp if potentially forecasting or suggesting the demise of an animal of interest.

Thanks for your rapid responses.

Randy

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 18:14
To: Davis, Neil
Cc: Jenkins, Randy
Subject: Re: SRKW J-50

The animals are in an isolated area on the West Coast of Vancouver Island near Swiftsure Bank. Hopefully this gives you some context.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 3:11 PM
To: Davis, Neil
Cc: Jenkins, Randy
Subject: Re: SRKW J-50

Hi Neil,
The conditions are very poor for veiwing on the water. Just clarified things with Sheila and NOAA. J-pod was seen on Saturday heading west. J-50 was seen at that time by NOAA. Brian Gisborne was on water on Sunday in poor conditions and saw K and L pod and some J's and did not see J50. Due to the conditions it was almost

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certainly an incomplete count. J50 is known for straying away from the group so not unusual. No sightings yesterday and today as the viewing conditions are very poor. That is the latest I have. There is only a couple 100 meters of visability due to the smoke/fog. Hope this is useful.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Davis, Neil
Sent: Tuesday, August 21, 2018 2:46 PM
To: Cottrell, Paul
Subject: Fw: SRKW J-50

Can you assist?

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Sent: Tuesday, August 21, 2018 2:16 PM
To: Davis, Neil; Harber, Lee
Cc: Scott, Paul G; Moore, Kendra
Subject: SRKW J-50

Can someone please confirm the information below (*J50 not sighted past couple days but her mother and others sighted multiple times*)... the last update I had was that J pod was sighted on August 19th. Is it the case that J50 is no longer with the Pod??

I had only earlier this afternoon advised that there wasn't anything new to report today on SRKW and then Science sends this message below to the acting ADM FHM who is now asking for details and whether he should send the DM a heads up on this. Any info would be appreciated.

Thanks.

Randy

From: Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Sent: Tuesday, August 21, 2018 3:52 PM
To: Landry, Jean; Nadeau, Simon
Cc: Moore, Wayne; Kennedy, Eddy
Subject: Getting ready.....

Two items wrt SRKW J-50:
Please be advised that J50 – the emaciated SRKW – has not been seen for a couple of days now. While way too soon to speculate on possible significance this is noteworthy given that her mother and other pod members have been observed multiple times during this period. There is significant presence on the water and we will advise if there is a update.

Also, FM has submitted an anticipatory request for science advice based on the recent lab analysis results that indicated feces collected from some (unknown) members of the J-Pod contained a parasite and that, as a consequence, NOAA may submit a request for a license amendment to administer parasite treatment in Canadian waters to J50 (if the whale is observed).

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Science has begun preliminary work to address both of these issues.

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Greene, Annely
Sent: August-22-18 11:13 AM
To: Cottrell, Paul
Subject: RE: SRKW J-50

Thanks, it is good to get an update. I have been wondering on the status.

From: Cottrell, Paul
Sent: August-22-18 11:12 AM
To: Sloan, Lara; Girouard, Louise
Cc: Greene, Annely
Subject: Fw: SRKW J-50

Hi Guys,
Should have included you on update!

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Wednesday, August 22, 2018 8:47 AM
To: Jenkins, Randy; Davis, Neil; Harber, Lee
Cc: Moore, Kendra; Scott, Paul G
Subject: Re: SRKW J-50

Thanks Randy,
As an update, just received information from DFO contractor working off the West Coast of Vancouver Island (ie through DFO science) that J50 was seen with mom last night at 6:45 PM off Carmanah Point traveling toward Nitinat. It was a super pod so, J, K and L pods were all present. J16 mom was observed foraging and close with J50.
When are we hiring for the hubs and getting new staff in place as it is much needed asap. I hope this is a priority action. The summer is going fast...
As I mentioned, updates from all the potential sources of information (eg whale watch industry, NOAA, DFO CP, DFO RM, DFO science, NGO's, Straitwatch, researchers, commercial vessels, cetacean sightings network, etc) are not always real time and sometimes the information is received next day [redacted] It is a big ocean out here and with the fog/smoke it has made locating whales when offshore very difficult. The trans-boundary nature of the movements further complicates things. Often only a small portion of a SRKW pod are seen (ie not all members of a pod are observed). This includes J50 and J35. Hope this is useful context.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Jenkins, Randy
Sent: Wednesday, August 22, 2018 6:44 AM
To: Cottrell, Paul; Davis, Neil; Harber, Lee
Cc: Moore, Kendra; Scott, Paul G
Subject: RE: SRKW J-50

Yes it would be useful for us if the daily info we receive included any and all updates/information/plans from RM, C&P, science, NOAA and anyone else connected to SRKW so that a complete summary can be presented on what the latest

s.21(1)(a)
s.21(1)(b)
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information… consolidation and compilation of relevant whale information is something we would envision as a role for the "HUBS" in the future (on both coasts)… for the short term would it be helpful if Kendra developed a short checklist/template where we could capture updates from the various players?

Thanks.
Randy

From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 6:35 PM
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Thanks.

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Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-22-18 11:58 AM
To: Scott, Paul G; Cottrell, Paul; Harber, Lee
Subject: SRKW Update Note
Attachments: MECTS-#3949687-v8-IN-Southern_Resident_Killer_Whale_Update.docx

Hi all,

Attached is today's SRKW update note for your review. Thanks to Paul C. for all the information that went into it. A couple additional outstanding questions:

1. Current monitoring efforts, including NOAA?

2. Update on J35. Last seen?

Additionally, as suggested by Randy this morning, I will send an email reporting template along shortly.

Thanks,

Kendra

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page 3376

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-22-18 4:25 PM
To: Davis, Neil; Thomson, Andrew
Cc: Greene, Annely
Subject: Fw: SARA license application

Hi Neil/Andy,
Some good feedback from Dr Raverty (MM vet expert) on the proposed NOAA activities which we will include in licence/authorization reporting along with DFO MM science feedback.
We should have a draft for you guys by COB tomorrow.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: Wednesday, August 22, 2018 12:33 PM
To: Cottrell, Paul; Greene, Annely
Subject: RE: SARA license application

Paul,
The proposal looks fine, some considerations include

-With regards to point 6, the total volume of administered antibiotic should be provided and whether this can be accommodated in a single or multiple (2 or more) syringes (administered concurrently or sequentially).

-in point 7, the administration of the anti-parasitide is well defined, but how will administration of antibiotic and ivermectin be prioritized, has the vet group recommended the administration of both concurrently, or will one take precedence over the other.

-I am not too familiar with the collared syringes and you may wish to request an image or photo (with scale) be sent with measurements as to the length of the flanges or barbs documented and whether the collared syringes will be sterilized/disinfected prior to use. As this syringe may be lodged for some time in the animal, if possible, it should be sterilized prior to deployment.

-How will the injection sites be recorded and evaluated over time to assess an adverse reaction or tissue injury? There will be videography and photos at the time of injection, how will this effort compare with follow up evaluations or assessments. Will photos and video be available to DFO to review the tag wound site?

May have some additional points after the vet call tomorrow.

Thank you
Stephen

s.19(1)

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From: Cottrell, Paul [mailto:Paul.Cottrell@dfo-mpo.gc.ca]
Sent: Wednesday, August 22, 2018 11:17 AM
To: Raverty, Stephen AGRI:EX
Cc: Greene, Annely
Subject: Fw: SARA license application

Hi Stephen,
We have received this proposal from NOAA/Teri to amend the current DFO licence to include anti-parasite medication application and the use of a collared dart for J50. Your review would be very much appreciated. I have also sent it to DFO MM science for review. Annely and I are drafting up an amended letter of authorization in anticipation of approval. Let me know if you are able to have a look, sorry for the short notice. Your expertise is very much appreciated!
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Wednesday, August 22, 2018 11:10 AM
To: Davis, Neil; Thomson, Andrew; Kennedy, Eddy; Thornton, Sheila; MacConnachie, Sean; Sloan, Lara; Girouard, Louise; Greene, Annely; Cauffope, Genevieve; Webb, Cheryl; Doniol-Valcroze, Thomas
Cc: Moore, Kendra; Jenkins, Randy
Subject: Fw: SARA license application

Hi All,
Application from NOAA to administer anti parasitic compound and utilize a different dart to administer medication to J50 is attached. If MM science can please review and provide any feedback it would be very much appreciated. We are also going to have Dr Raverty (Provincial expert MM veterinarian) review the application and provide comments. Annely and I will draft up the amended letter of authorization once feedback received for Andy's signature.
Best,
Paul
Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Teri Rowles - NOAA Federal [redacted]
Sent: Wednesday, August 22, 2018 10:59 AM
To: Lynne Barre - NOAA Federal
Cc: Cottrell, Paul; Thornton, Sheila; Greene, Annely; Deborah Fauquier - NOAA Affiliate; Brad Hanson; Sarah Wilkin; Candice Emmons; Kristin Wilkinson
Subject: Re: SARA license application

Paul, Enclosed is the amendment to the SARA license for response to J50. As Kristin discussed with you we have added an anthelminic (anti-parasitic) to the treatment regime based on the fecal sample results identifying *contracaecum* parasites and have added the potential use of a collared needle for the dart. Please let us know if there are any questions.

THANK YOU

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On Thu, Aug 9, 2018 at 3:40 PM, Lynne Barre - NOAA Federal < [redacted] > wrote:
Hi Paul,
Attached is the completed SARA license application form along with the application document submitted yesterday. I've also attached documentation of Animal Care Committee compliance for the activities approved under the US NMFS Permit No. 18786-03.

I believe that Brad Hanson has already applied for foreign vessel clearance, but am awaiting confirmation. I can send along a photo of the vessel as soon as I get one from the team.

Please let us know if you need anything else and please provide confirmation that work can proceed in Canadian waters or a copy of the license or as soon as it is available.
Thanks,
Lynne

s.19(1)
s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-22-18 7:52 PM
To: MacConnachie, Sean
Subject: RE: SARA license application

Hi Sean,

[redacted]

Best,
Paul

Paul Cottrell

Pacific Marine Mammal Coordinator

Fisheries and Oceans Canada

200-401 Burrard St

Vancouver, BC

V6C 3S4

(604) 666-9965

From: Cottrell, Paul
Sent: Wednesday, August 22, 2018 5:23 PM
To: MacConnachie, Sean
Subject: Re: SARA license application

That is true, we are never totally unplugged in the field without communications. Enjoy the field!

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: MacConnachie, Sean
Sent: Wednesday, August 22, 2018 5:19 PM
To: Cottrell, Paul
Subject: RE: SARA license application

[redacted]

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From: Cottrell, Paul
Sent: August-22-18 5:18 PM
To: MacConnachie, Sean
Subject: Re: SARA license application

Awesome you are getting in the field, i
Best,
Paul

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From: MacConnachie, Sean
Sent: Wednesday, August 22, 2018 5:10 PM
To: Cottrell, Paul
Subject: RE: SARA license application

Well I'm glad my team are on top of it. I'm in the field doing fresh water SARA work so can't be much help,

From: Cottrell, Paul
Sent: August-22-18 12:03 PM
To: MacConnachie, Sean
Subject: Re: SARA license application

Yes, thanks Sean. We don't want to be seen as holding things up if J50 is in Canadian waters and NOAA is ready to go.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: MacConnachie, Sean
Sent: Wednesday, August 22, 2018 11:41 AM
To: Cottrell, Paul
Subject: Re: SARA license application

Hi Paul. I assume the timeline is asap?

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Sent: Wednesday, August 22, 2018 11:10 AM
To: Davis, Neil; Thomson, Andrew; Kennedy, Eddy; Thornton, Sheila; MacConnachie, Sean; Sloan, Lara; Girouard, Louise; Greene, Annely; Cauffope, Genevieve; Webb, Cheryl; Doniol-Valcroze, Thomas
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Khanna, Sukriti

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To: Raverty, Stephen AGRI:EX
Cc: Greene, Annely
Subject: Re: SARA license application

Hi Stephen,
We (DFO) want expert independent vet advice on the application activities/methods (ie outside of the operation) in Canadian waters. So if there are any questions you have on the application/methods maybe send my way and I will forward to Teri. This keeps our review separate from the NOAA operational review. Does this make sense? We have a separate process for DFO MM licence approval and in certain cases like this need expert review to ensure we have appropriate review. Thanks so much. Give me a call if you have any questions.
Best,
Paul

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From: Raverty, Stephen AGRI:EX
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To: Cottrell, Paul
Cc: Greene, Annely
Subject: RE: SARA license application

Paul,
There is a vet conf call scheduled for tomorrow at 9:00 am, may I please discuss this with the group to obtain additional information and follow up with you after the CCH call at 10:30 am. If necessary, we can arrange a call with Teri and people in the DFO science group to address additional details or concerns.
Will review later today and touch base.
Thank you
Stephen

We just finished the vet section of the tag guidelines for the IWC report on Monday and hopefully, they will be coming out shortly.

From: Cottrell, Paul [mailto:Paul.Cottrell@dfo-mpo.gc.ca]
Sent: Wednesday, August 22, 2018 11:17 AM
To: Raverty, Stephen AGRI:EX
Cc: Greene, Annely
Subject: Fw: SARA license application

Hi Stephen,
We have received this proposal from NOAA/Teri to amend the current DFO licence to include anti-parasite medication application and the use of a collared dart for J50. Your review would be very much appreciated. I have also sent it to DFO MM science for review. Annely and I are drafting up an amended letter of

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authorization in anticipation of approval. Let me know if you are able to have a look, sorry for the short notice. Your expertise is very much appreciated!
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Wednesday, August 22, 2018 11:10 AM
To: Davis, Neil; Thomson, Andrew; Kennedy, Eddy; Thornton, Sheila; MacConnachie, Sean; Sloan, Lara; Girouard, Louise; Greene, Annely; Cauffope, Genevieve; Webb, Cheryl; Doniol-Valcroze, Thomas
Cc: Moore, Kendra; Jenkins, Randy
Subject: Fw: SARA license application

Hi All,
Application from NOAA to administer anti parasitic compound and utilize a different dart to administer medication to J50 is attached. If MM science can please review and provide any feedback it would be very much appreciated. We are also going to have Dr Raverty (Provincial expert MM veterinarian) review the application and provide comments. Annely and I will draft up the amended letter of authorization once feedback received for Andy's signature.
Best,
Paul
Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Teri Rowles - NOAA Federal [redacted]
Sent: Wednesday, August 22, 2018 10:59 AM
To: Lynne Barre - NOAA Federal
Cc: Cottrell, Paul; Thornton, Sheila; Greene, Annely; Deborah Fauquier - NOAA Affiliate; Brad Hanson; Sarah Wilkin; Candice Emmons; Kristin Wilkinson
Subject: Re: SARA license application

Paul, Enclosed is the amendment to the SARA license for response to J50. As Kristin discussed with you we have added an anthelminic (anti-parasitic) to the treatment regime based on the fecal sample results identifying *contracaecum* parasites and have added the potential use of a collared needle for the dart. Please let us know if there are any questions.

THANK YOU

On Thu, Aug 9, 2018 at 3:40 PM, Lynne Barre - NOAA Federal <[redacted]> wrote:
Hi Paul,
Attached is the completed SARA license application form along with the application document submitted yesterday. I've also attached documentation of Animal Care Committee compliance for the activities approved under the US NMFS Permit No. 18786-03.

I believe that Brad Hanson has already applied for foreign vessel clearance, but am awaiting confirmation. I can send along a photo of the vessel as soon as I get one from the team.

Please let us know if you need anything else and please provide confirmation that work can proceed in Canadian waters or a copy of the license or as soon as it is available.
Thanks,

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Lynne

No information has been removed or severed from this page

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s.16(2)

s.69(1)(g) re: (a)

Dozie, Juachi

From: Webb, Cheryl
Sent: August-22-18 10:29 AM
To: Lowe, Carmel; Thomson, Andrew; Davis, Neil
Cc: Kennedy, Eddy; Silverstein, Adam
Subject: RE: SRKW

I can confirm that Adam will be the lead for EMB.

Cheryl

From: Lowe, Carmel
Sent: Wednesday, August 22, 2018 10:22 AM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Cc: Kennedy, Eddy <Eddy.Kennedy@dfo-mpo.gc.ca>
Subject: RE: SRKW

Eddy Kennedy will be the Science lead on this but note he not available today.

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7

Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

-----Original Appointment-----
From: Barton, Meagan **On Behalf Of** Thomson, Andrew
Sent: August 21, 2018 2:31 PM
To: Thomson, Andrew; Davis, Neil; Webb, Cheryl; Lowe, Carmel
Subject: SRKW
When: August 22, 2018 8:30 AM-9:00 AM (UTC-08:00) Pacific Time (US & Canada).
Where: Killer Whale 1-877-413-4781 ID:

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Dozie, Juachi

From: Lowe, Carmel
Sent: August-22-18 10:22 AM
To: Thomson, Andrew; Davis, Neil; Webb, Cheryl
Cc: Kennedy, Eddy
Subject: RE: SRKW [redacted]

Eddy Kennedy will be the Science lead on this but note he not available today.

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7

Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

-----Original Appointment-----
From: Barton, Meagan **On Behalf Of** Thomson, Andrew
Sent: August 21, 2018 2:31 PM
To: Thomson, Andrew; Davis, Neil; Webb, Cheryl; Lowe, Carmel
Subject: SRKW [redacted]
When: August 22, 2018 8:30 AM-9:00 AM (UTC-08:00) Pacific Time (US & Canada).
Where: Killer Whale 1-877-413-4781 ID: 7164844

[redacted]

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Davis, Neil
Sent: August-22-18 11:19 AM
To: Malikian, Janine
Subject: RE: For review: Updated media lines/Qs and As - RKW proposed amended Recovery Strategy
Attachments: QA_AmendedRecoveryStrategy_RKW_Update Aug 18 ND edits .docx

Hi Janine

Some edits attached. [redacted]

Neil

From: Malikian, Janine
Sent: Wednesday, August 22, 2018 8:43 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: FW: For review: Updated media lines/Qs and As - RKW proposed amended Recovery Strategy

Hi Neil,

Bumping this up in your email. Would it be possible to let me know of concerns or changes this morning? NHQ is asking for the lines.

Thanks,
Janine

From: Malikian, Janine
Sent: August-21-18 11:36 AM
To: Davis, Neil
Subject: For review: Updated media lines/Qs and As - RKW proposed amended Recovery Strategy

Hi Neil,

Looking for your review on the attached updated lines for the RKW proposed amended recovery Strategy. ETA for posting is still this Friday as far as I know.

Not many updates, but I've highlighted most, [redacted]

Thanks,

Janine

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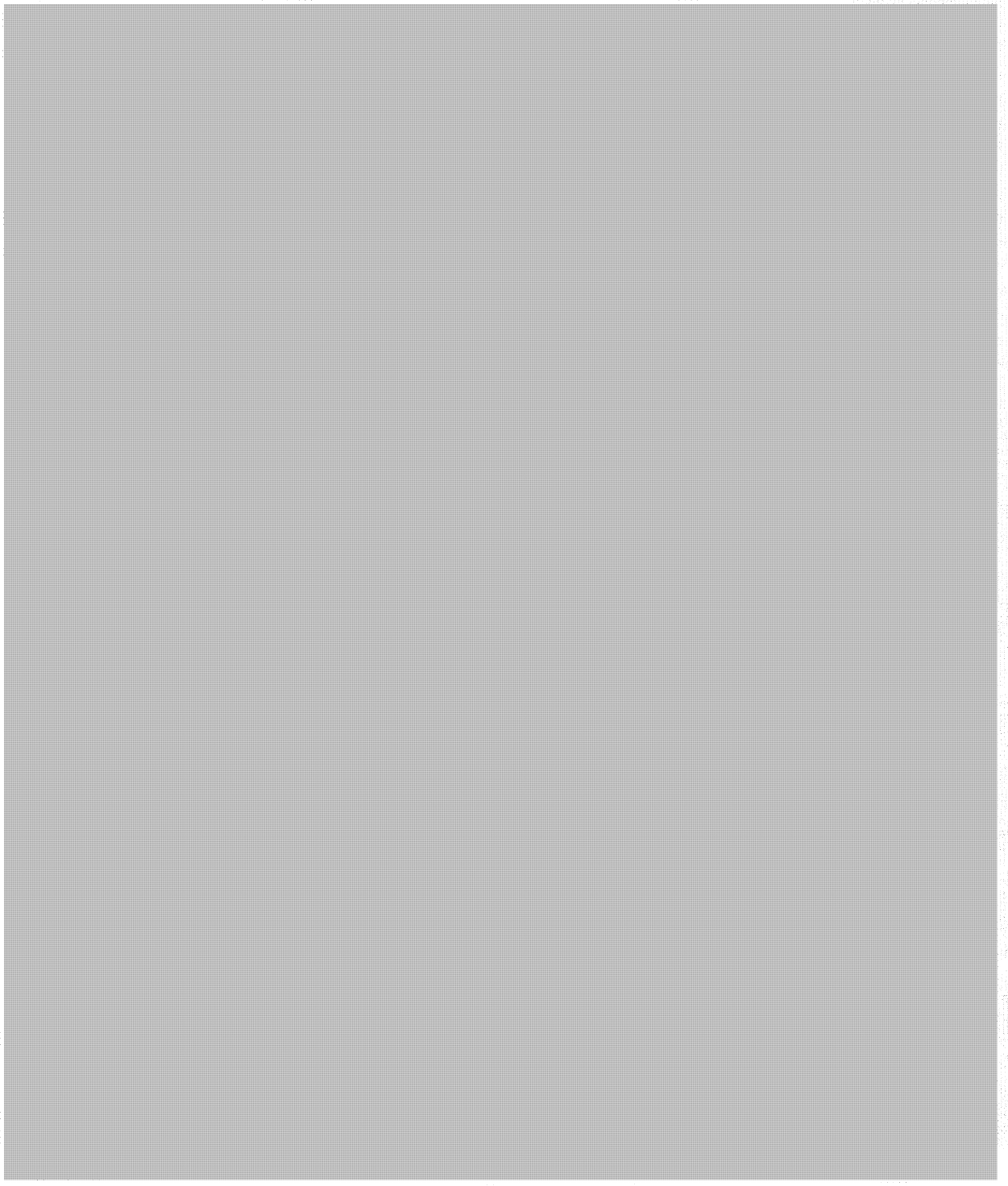
s.21(1)(a)

s.21(1)(b)

DRAFT

KEY MESSAGES / QUESTIONS AND ANSWERS

Consultation On Proposed Amended Recovery Strategy For Northern And Southern Resident Killer Whales



Pages 3349 to / à 3351
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Davis, Neil
Sent: August-22-18 11:33 AM
To: Thomson, Andrew
Cc: Webb, Cheryl; Nener, Jennifer; Stadel, Angela; Lowe, Carmel
Subject: RE: Enhanced consultations for amended SRKW critical habitat

Ok, I think we can take the lead on this and draft something for this group's review

From: Thomson, Andrew
Sent: Wednesday, August 22, 2018 11:24 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Nener, Jennifer <Jennifer.Nener@dfo-mpo.gc.ca>; Stadel, Angela <Angela.Stadel@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Subject: Enhanced consultations for amended SRKW critical habitat

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada

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Khanna, Sukriti

From: Davis, Neil
Sent: August-22-18 8:33 PM
To: Jenkins, Randy; Moore, Kendra; Scott, Paul G
Subject: Fw: SARA license application

NOaa application for anti parasitic treatment and use of different dart has been approved following review by DFO Science and provincial mm vet. Whales remain out of reach for treatment but in event they return to inshore waters in Canada, NOaa is licensed to undertake the work w us and Cdn experts

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca>
Sent: Wednesday, August 22, 2018 4:20 PM
To: Doniol-Valcroze, Thomas; Davis, Neil; Thomson, Andrew; Kennedy, Eddy; Thornton, Sheila; MacConnachie, Sean; Sloan, Lara; Girouard, Louise; Greene, Annely; Cauffope, Genevieve; Webb, Cheryl
Cc: Moore, Kendra; Jenkins, Randy
Subject: Re: SARA license application

Thanks Thomas,
Very much appreciated and really appreciate the quick turn around on this. Annely and I will draft up a licence for RM RD signature.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Doniol-Valcroze, Thomas
Sent: Wednesday, August 22, 2018 3:55 PM
To: Cottrell, Paul; Davis, Neil; Thomson, Andrew; Kennedy, Eddy; Thornton, Sheila; MacConnachie, Sean; Sloan, Lara; Girouard, Louise; Greene, Annely; Cauffope, Genevieve; Webb, Cheryl
Cc: Moore, Kendra; Jenkins, Randy
Subject: RE: SARA license application

Hi,

I have reviewed the application and discussed it with Sheila today. The application is detailed and well justified, the methods are well tested and the personnel is experienced. Therefore, we both agree that the proposed activities in this amended version are acceptable.

Best,
Thomas

Thomas Doniol-Valcroze, PhD
Head, Cetacean Research Program
Pacific Biological Station
Fisheries and Oceans Canada
Nanaimo, BC V9T 6N7

s.19(1)

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Tel: 250-729-8375
thomas.doniol-valcroze@dfo-mpo.gc.ca

De : Cottrell, Paul
Envoyé : 22 août 2018 11:10
À : Davis, Neil; Thomson, Andrew; Kennedy, Eddy; Thornton, Sheila; MacConnachie, Sean; Sloan, Lara; Girouard, Louise; Greene, Annely; Cauffope, Genevieve; Webb, Cheryl; Doniol-Valcroze, Thomas
Cc : Moore, Kendra; Jenkins, Randy
Objet : Fw: SARA license application

Hi All,
Application from NOAA to administer anti parasitic compound and utilize a different dart to administer medication to J50 is attached. If MM science can please review and provide any feedback it would be very much appreciated. We are also going to have Dr Raverty (Provincial expert MM veterinarian) review the application and provide comments. Annely and I will draft up the amended letter of authorization once feedback received for Andy's signature.
Best,
Paul
Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Teri Rowles - NOAA Federal <
Sent: Wednesday, August 22, 2018 10:59 AM
To: Lynne Barre - NOAA Federal
Cc: Cottrell, Paul; Thornton, Sheila; Greene, Annely; Deborah Fauquier - NOAA Affiliate; Brad Hanson; Sarah Wilkin; Candice Emmons; Kristin Wilkinson
Subject: Re: SARA license application

Paul, Enclosed is the amendment to the SARA license for response to J50. As Kristin discussed with you we have added an anthelminic (anti-parasitic) to the treatment regime based on the fecal sample results identifying *contracaecum* parasites and have added the potential use of a collared needle for the dart. Please let us know if there are any questions.

THANK YOU

On Thu, Aug 9, 2018 at 3:40 PM, Lynne Barre - NOAA Federal wrote:
Hi Paul,
Attached is the completed SARA license application form along with the application document submitted yesterday. I've also attached documentation of Animal Care Committee compliance for the activities approved under the US NMFS Permit No. 18786-03.

I believe that Brad Hanson has already applied for foreign vessel clearance, but am awaiting confirmation. I can send along a photo of the vessel as soon as I get one from the team.

Please let us know if you need anything else and please provide confirmation that work can proceed in Canadian waters or a copy of the license or as soon as it is available.
Thanks,
Lynne

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Khanna, Sukriti

From: Davis, Neil
Sent: August-22-18 11:31 AM
To: Li, Ge
Cc: Khanna, Sukriti; Dozie, Juachi
Subject: RE: Salmon IFMP Blurb - SRKW Approach Distance FN August 16 2018.doc
Attachments: FN - SRKW Approach Distance August 16 2018 ND edits.doc

Hi Ge

Some edits attached

Thx
Neil

From: Li, Ge
Sent: Tuesday, August 21, 2018 11:28 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: FW: Salmon IFMP Blurb - SRKW Approach Distance FN August 16 2018.doc

Hi Neil,

Just wanted to follow up on this.

Thanks,

Ge Li

Regional Salmon Officer
Fisheries Management
Fisheries & Oceans Canada
#200 - 401 Burrard St
Vancouver, BC. V6C 3S4
Phone: 604-666-3935
Email: ge.li@dfo-mpo.gc.ca

From: Li, Ge
Sent: August-17-18 8:03 AM
To: Davis, Neil
Cc: Greene, Annely; Dobko, Ashley; Grout, Jeff
Subject: RE: Salmon IFMP Blurb - SRKW Approach Distance FN August 16 2018.doc

Hi Neil,

Ashley (away today) and Annely worked on the attached fishery notice on the SRKW approach distance. Can you please take a look and let me know if you think it's good to go for release?

Thank you!

Ge Li

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Regional Salmon Officer
Fisheries Management
Fisheries & Oceans Canada
#200 - 401 Burrard St
Vancouver, BC. V6C 3S4
Phone: 604-666-3935
Email: ge.li@dfo-mpo.gc.ca

From: Greene, Annely
Sent: August-16-18 4:16 PM
To: Dobko, Ashley
Subject: RE: Salmon IFMP Blurb - SRKW Approach Distance FN August 16 2018.doc

Whatever you think is best. A

From: Dobko, Ashley
Sent: August-16-18 4:13 PM
To: Greene, Annely
Subject: RE: Salmon IFMP Blurb - SRKW Approach Distance FN August 16 2018.doc

I think that looks great! Would you like us to send it to ops for posting or do you need your team/Neil to review and send it?

From: Greene, Annely
Sent: August-16-18 3:52 PM
To: Dobko, Ashley
Subject: Salmon IFMP Blurb - SRKW Approach Distance FN August 16 2018.doc

Ashley, give this a read and tell me if it is sufficient and clear. A

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Fishery Notice Template

FOR OPS CENTRE USE ONLY:

ORIGINATOR & TELEPHONE NO.:

Ashley Dobko 604-666-1505

DATE TO BE SENT:

IS THIS NOTICE OF A VARIATION ORDER? IF YES, IS THIS ACTION PART OF THE APPROVED PLAN?

No

IS THERE A NEWS RELEASE PLANNED OR RECOMMENDED?

No

DETAILS FOR NOTICE:

1. FISHERY CATEGORY(S):

General Information

2. SPECIES AFFECTED:

GENERAL - ALL

3. SUBJECT LINE:

General Information - All Species - All Areas - Amended Marine Mammal Regulations effective July 11, 2018 - New Marine Mammal Approach Distance

4. LIST ALL AREAS OR REGIONS IMPACTED:

ALL

5. NOTICE TO BE SUPERSEDED:

N/A

6. BODY OF NOTICE TEXT:

The amended Marine Mammal Regulations for whale watching and approaching marine mammals came into effect on July 11, 2018. The regulations include a minimum approach distance of 200 m for all killer whale populations– in Canada's Pacific waters ~~in B.C.~~ ~~and the Pacific Ocean~~ and 100 metres for other whales, dolphins and porpoises.

The amended regulations clarify what it means to disturb a marine mammal, including: feeding, swimming or interacting with it; moving it (or enticing/causing it to move); separating a marine mammal from its group or going between it and a calf; trapping marine mammals between

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a vessel and the shore, or between boats; as well as tagging or marking it.

More information on distances tailored to particular circumstances in Canada are outlined in the Regulations: http://laws-lois.justice.gc.ca/eng/regulations/sor-93-56/page-1.html

FOR MORE INFORMATION:

Marine Mammal Program
604-666-0071

The 24 hour toll-free phone-in line for fisheries notices is 1-866-431-3474

s.69(1)(g) re: (a)
s.69(1)(g) re: (e)
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Davis, Neil

From: Davis, Neil
Sent: Wednesday, August 22, 2018 12:52 PM
To: Nener, Jennifer (Jennifer.Nener@dfo-mpo.gc.ca); Doucette, Claire; Girouard, Louise
Cc: Thomson, Andrew; Webb, Cheryl; Carlson, Mike; Brekke, Heather
Subject: SRKW
Attachments:

Hi all,

NHQ SARA is leading the development of

We're looking for a participant from the Salmon team, C&P, and Comms to join participants from EMB, SARA, Fish Mgmt, and Science on this Working Group. I've asked Heather Brekke, the SARA Marine Team Lead to coordinate the working group, so she will be following up w the participants you identify to get this work underway as soon as possible. I expect we'll seek a few participants from NHQ as well.

Timelines are not totally clear yet, but it appears we have until around the end of the month to at least complete a first draft of this work.

Neil

Neil Davis
Director, Resource Management
Fisheries and Oceans Canada | Government of Canada
Neil.Davis@dfo-mpo.gc.ca | Tel: (604) 666-0115

Directeur, Gestion des Ressources
Pêches et Océans Canada | Gouvernement of Canada
Neil.Davis@dfo-mpo.gc.ca | Tel: (604) 666-0115

Pages 3360 to / à 3362

are withheld pursuant to sections

sont retenues en vertu des articles

69(1)(g) re: (e), 69(1)(g) re: (a)

of the Access to Information Act

de la Loi sur l'accès à l'information

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Mbarushimana, Jenny

From: Cottrell, Paul
Sent: August-22-18 11:10 AM
To: Davis, Neil; Thomson, Andrew; Kennedy, Eddy; Thornton, Sheila; MacConnachie, Sean; Sloan, Lara; Girouard, Louise; Greene, Annely; Cauffope, Genevieve; Webb, Cheryl; Doniol-Valcroze, Thomas
Cc: Moore, Kendra; Jenkins, Randy
Subject: Fw: SARA license application
Attachments: MM- SARA LICENCE APPLICATION_MMHSRP_amendment.docx; MMHSRP application Study Techniques.docx

Hi All,
Application from NOAA to administer anti parasitic compound and utilize a different dart to administer medication to J50 is attached. If MM science can please review and provide any feedback it would be very much appreciated. We are also going to have Dr Raverty (Provincial expert MM veterinarian) review the application and provide comments. Annely and I will draft up the amended letter of authorization once feedback received for Andy's signature.
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Sent: Wednesday, August 22, 2018 10:59 AM
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Cc: Cottrell, Paul; Thornton, Sheila; Greene, Annely; Deborah Fauquier - NOAA Affiliate; Brad Hanson; Sarah Wilkin; Candice Emmons; Kristin Wilkinson
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Thanks,
Lynne

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Marine Mammal/SARA Licence Application Instructions

The Species at Risk Act (SARA) was proclaimed in June 2003, by the Government of Canada for the protection of species at risk. A licence is required under the authority of the Fisheries (General) Regulations, Marine Mammal Regulations and the Species at Risk Act. This application is to be completed for all research/projects affecting a marine mammal species which is listed as Extirpated, Endangered or Threatened under Canada's Species at Risk Act. Information about the Act, status and location of SARA-listed species can be obtained at the following website: http://www.sararegistry.gc.ca/default_e.cfm. Use this application if your research covers a variety of species that are both listed and non-listed under SARA.

For marine mammal species, including those listed as Special Concern under SARA, a Marine Mammal Licence Application is required and can be obtained from the Program Officer listed at the end of this document.

It is recommended that licence applications be submitted prior to **March 31st** each year and may be submitted pending dates and funding information is tentative. Applications received after **March 31st** will take additional time to process (i.e. up to 8 weeks) due to DFO operational limitations during the summer research period.

You need to apply for a Marine Mammal/SARA Licence when:

Contemplating an activity affecting a marine mammal that is listed as 'Extirpated', 'Endangered' or 'Threatened' on Schedule 1 of the SARA. Species listed as Special Concern are under the authority of the Fisheries (General) Regulations and the Marine Mammal Regulations and therefore require a Marine Mammal Licence.

What kind of activities may be authorized under SARA?

To be successful in your licence application, your activity must fall into one of the following categories under section 73(2) of SARA. The agreement may be entered into, or the licence issued, only if the Minister is of the opinion that:

a) The activity is scientific research relating to the conservation of the species and conducted by qualified persons;
b) The activity benefits the species or is required to enhance its chance of survival in the wild; or
c) Affecting the species is incidental to the carrying out of the activity.

Part I – Applicant Information:

An Animal Care Permit or equivalent is required for research activities with the potential to disturb marine mammals, particularly if permission to capture or conduct invasive sampling is requested. If you believe that you require an ACC authorization and are not affiliated with an academic institution, please contact the DFO Program Officer listed at the end of this document.

Part II – Study/Project Information

Please provide information regarding the logistics of the proposed research and be as accurate as possible. If a study proposal or work plan has been developed, please attach it to your application. Numbers below pertain to the corresponding licence application numbers.

1. Provide Project Title and an abstract (in 100 words or less) that summarizes the proposed research activity.
2. Identify the lead investigator as well as research assistants. Indicate if assistants will be working independently of lead investigator.
3. Indicate all marine mammal species that the research/project will target or potentially impact. Status and location of SARA-listed species can be obtained at the following website: http://www.sararegistry.gc.ca/default_e.cfm
4. Indicate the date and locations where the activity will occur. A listing of DFO Statistical Areas is available at the following website: http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/areas-secteurs/index-eng.html. A "blanket" licence for the entire BC coast will not be issued without a detailed project plan and sufficient justification. Multi-year permits will be issued for a maximum of 3 years for ongoing established research programs.
5. Attach a picture of the research vessel(s), aircraft or aerial drone that will be used and submit with your application. It is the responsibility of the applicant to obtain Foreign Vessel Clearance (FVC) www.state.gov/e/oes/ocns/opa/rvc when a non-Canadian vessel, aircraft or aerial drone, will be used for research purposes in Canadian waters. If you are trailering a US vessel for use in Canadian waters, a Customs Clearance number must be obtained at the Canadian border.

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6. 6(g): When marine mammals or marine mammal parts are to be transferred within British Columbia a Marine Mammal Transfer Licence is required. To transport across provincial or territorial boundaries, a Marine Mammal Transport Licence must be obtained. Please refer to the following website for information on which species require a Convention for the International Trade in Endangered Species (CITES) permit: http://www.cites.org/ to transport across an international boundary.
7. The "Be Whale Wise Guidelines - Marine Wildlife Guidelines for Boaters, Paddlers and Viewers (Revised 2011)" have been established to protect marine mammals from disturbance or harassment. Copies of the guidelines can be obtained online or from the Program Officer.
8. Self Explanatory
9. A detailed description of the project is necessary to assess potential impacts on the species of concern and other non targeted species. Please be specific as to the number, duration and distance of approach, restraints or sampling periods. If available, a work plan or proposal is useful in providing an assessment of the project. Attach field collection methods and techniques.

Part III – Impact and Mitigation Assessment

10. It is important to list all SARA-listed species and non-SARA listed species that may occur in the proposed research area and the anticipated harassments and/or mortalities for each.
11. Describe in detail anticipated or potential disturbances or mortalities to all species listed in Section 10 and include impacts on habitat(s) used by the species. List each species, the nature of harm, and rank the likelihood of harm or encounters (High, Medium, Low).
12. For information on Section 73(3) pre-conditions of SARA refer to: http://www.sararegistry.gc.ca/default_e.cfm. Pre-conditions (a) and (b) require that alternative measures such as area and/or time changes or changes to sampling gear or techniques must be considered and implemented if feasible before a licence can be issued. For pre-condition (c), please indicate (to the best of your knowledge) whether the proposed research activity, given (a) and (b), will jeopardize survival or recovery of the species. For the Minister of Fisheries and Oceans to be of the opinion that all of the pre-conditions laid out in Section 73(3) have been met, the onus is on the project proponent to do the following:
    - Be proactive in their research design,
    - Demonstrate awareness of the provisions of SARA, and
    - Demonstrate that measures are being taken to minimise harm to listed species, and that they have considered all alternatives to carrying out the activity.

Part IV – SARA Recovery Planning Evaluation

13. Copies of final Recovery Strategies, Action Plans and Management Plans are available on the SARA website: http://www.sararegistry.gc.ca/default_e.cfm. If recovery planning for the species under consideration has not been initiated, please indicate to the best of your ability how your proposed research/project supports species recovery.

Are other licences still required?

A Marine Mammal/SARA licence does not constitute an authorization to access property or supersede, cover or replace the need for other applicable authorizations which are the responsibility of the applicant., i.e. Foreign Vessel Clearance, National Wildlife Area research permits, Convention for the International Trade in Endangered Species (CITES) permits, Migratory Bird permits, additional Fisheries Act licences or Provincial permits under the BC Wildlife Act.

Submitting Your Application:

Please contact the undersigned if you have any questions and send your completed application via fax or email to:

Annely Greene
DFO Marine Mammal Program Officer
Fisheries & Oceans Canada – Pacific Region
401 Burrard Street, Vancouver, BC V6C 3S4

Phone: 604-666-0071 Email: Annely.Greene@dfo-mpo.gc.ca

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Marine Mammal/SARA Licence Application
Fisheries & Oceans Canada – Pacific Region

Please use **TAB key to move between fields for check boxes**

PART I - APPLICANT INFORMATION

Date:	August 9, 2018 Amended August 21, 2018			
Name:	Teresa Rowles			
Organization:	NOAA/National Marine Fisheries Service – Office of Protected Resources			
Street:	1315 East-West Highway			
City:	Silver Spring			
Province/State:	Maryland			
Country:	USA	Postal Code/Zip:	20910	
Phone:	+1 301-427-8448	Cellular:	[redacted]	Fax: 301-713-4060
Email:	[redacted]			

Applicant Experience/Credentials: List relevant research programs, publications and/or attach CV. **Coordinator the U.S. Marine Mammal Health and Stranding Response Program. To learn more about the program, please visit: https://www.fisheries.noaa.gov/national/marine-life-distress/marine-mammal-health-and-stranding-response-program**

Do you or your organization hold an Animal Care Committee Permit for this work? Yes ☒ No ☐

Attach copy to application - **Permit #NW/AK 2015-2** If no, explain why *(Refer to Part I – Applicant Information).*

List previous issued Marine Mammal/SARA licence numbers:

PART II - STUDY/PROJECT INFORMATION

1. **Project Title:** **Conduct Marine Mammal Emergency Response Activities in Canadian Waters**

Project Abstract:

2. **Personnel:**

J50, a 4 year old endangered Southern resident killer whale, has presented in declining health. In order to better understand the health status of J50, a veterinary health assessment and sample collection is needed. This assessment may be conducted in U.S. waters (all activities are currently permitted), but the response would be significantly improved if the assessment team could conduct activities in Canadian waters as the whales move across the border. All assessment activities in Canada will be conducted in consultation with DFO.

Lead Investigator: **Teri Rowles**

Assistants:

Dr. Joe Gaydos (SeaDoc) Health assessment including diagnostics and medical treatment
Dr. Jim McBain (Sea World) Health assessment including diagnostics and medical treatment
Dr. Hendrik Nollens (Sea World) Health assessment including diagnostics and medical treatment
Dr. Martin Haulena (Vancouver Aquarium) Health assessment including diagnostics and medical treatment
Dr. Brad Hanson (NOAA) Sample collection and vessel driver
Candice Emmons (NOAA) Sample collection and vessel driver
Jeff Foster (Whale Sanctuary Project) Sample collection and vessel driver
Katy Foster (Whale Sanctuary Project) Sample collection and vessel driver

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Trevor Foster (research tech) **Sample collection and vessel driver**

3. Species Information:

Species Studied: **Southern Resident killer whales (*Orcinus orca*)**

4. Dates & Location:

Study Period: From: **August 9, 2018** To: **TBD (until an emergency response is no longer needed)**

Are you requesting a multi-year licence? If yes, state reason for request below. Yes ☐ No ☒

(Refer to Part II, Item 3 of the Instructions)

Study Area/Location: **All areas where Southern Resident killer whales may occur (primarily areas 18, 19, and 20)**

(For DFO Statistical areas refer to Part II, Item 4 of the instructions)

5. Vessel/Aircraft/Aerial Drone Information: Attach photograph of research vessel(s) with your application.

Name(s): NOAA Hurricane 733

Registration #: MOC-1

Country of Registration: USA

If vessel, aircraft or aerial drone is registered outside of Canada, have you applied for Foreign Vessel Clearance? *(If no, please refer to Part II, Item 5 of the Instructions)* Yes ☒ No ☐

Comment:

METHODOLOGY:

6. Will animals be subjected to invasive sampling? Invasive sampling includes any methodology that involves capture and restraint of animals, direct or remote sampling of blood or tissues and the attachment of any apparatus to the marine mammal. Yes ☒ No ☐

a) If yes, how many samples will be taken? Breath and blow samples will be taken remotely. Skin scrapings may be taken if discoloration is noted.

a) Will live animals be collected? Yes ☐ No ☒

b) If yes, how many animals will be collected?

c) Will live animals be transported from one marine environment to another marine environment or holding facility? Yes ☐ No ☒

d) If yes, state location and rationale:

e) If yes to d) will animals be returned into the marine environment in the future? Yes ☐ No ☐

f) If yes, state location and rationale:

g) Will animals, specimens or samples be transported? Yes ☒ No ☐

i) Within British Columbia? Yes ☒ No ☐

ii) To another Province or Territory in Canada Yes ☐ No ☒

iii) Across an international boundary? *(Refer to Part II, Item 5 CITES in the Instructions)* Yes ☒ No ☐

7. Do you propose to be in contravention of regionally posted guidelines (Be Whale Wise Guidelines – for Boaters, Paddlers and Viewers) for any planned activity? If yes Yes ☒ No ☐

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	explain rationale. (*Refer to Part II, Item 7 of the Instructions)* **We will need to close approach J50 (and may incidentally approach other individuals in her pod) to obtain samples for health screening. See attached for specific activities.**
8.	Objective of Research/Project:
	For the initial veterinary health assessment, and sample collection, the following activities are proposed (in priority order): **1. Collection of breath/blow sample** **2. Collection of fecal sample** **3. Collection of other samples opportunistically available (e.g., mucus and skin).** **4. If skin discoloration is noted, collection of skin scrapings from discolored area.** **5. Completion of a visual veterinary health assessment and photo/video documentation.** **6. Providing antibiotic treatment from the NWFSC or SeaDoc boat via pole syringe or remote dart delivery.** **7. Providing parasite treatment from the NWFSC or SeaDoc boat via pole syringe or remote dart delivery.** **8. Use of collared needles if the velocity, angle, and pressure of the un-collared needle normally used does not effectively delivery the full dose of antibiotics and the anti-parasitic treatment.**
9.	Explain field collections/study techniques. Attach project work plan/proposal if available. **See attached plan.**

PART III – IMPACT ASSESSMENT

10.	SARA Species to be included in Permit:	Anticipated # of mortalities for each species:
	Southern Resident killer whale (*Orcinus orca*)	**0**
	Non-SARA Species to be included in Permit:	Anticipated # of mortalities for each species:
	None	**0**
11.	Describe anticipated or potential disturbances to the identified species, other species and/or the habitat:	

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The team will close approach the target animal of concern (J50) to obtain samples to determine the health status of the whale. Other members of her pod may also be incidentally harassed by close approach. The likelihood of harm from close approach is low. Impacts on other species are not anticipated. Samples to be collected include:

1. **Breath/blow samples will be collected using petri dishes attached to a carbon fiber pole. The likelihood of harm from breath/blow collection is low.**
2. **Opportunistic collection of fecal samples. No additional risk beyond close approach.**
3. **Opportunistic collection of other samples (mucous, sloughed skin, etc.). No additional risk beyond close approach. Close approaches will also allow more in-depth veterinary and visual assessments.**
4. **If skin discoloration is noted, skin scrapings may be taken. The contact between the sampling pole and the skin poses a low risk, as minor skin abrasions may occur.**
5. **Medical treatment via injectable delivery of antibiotics, anti-parasitics, or other injectable medications deemed necessary by the veterinary and management team. The injections with a syringe or un-collared needle poses a medium risk; there is a small potential abscess, localized pain, and inflammation at the injection site. More serious side effects such as muscle necrosis are possible but unlikely. The antibiotics to be used (Excede and Convenia) are both third generation and adverse side effects are not serious and occur at a low frequency. The anti-parasitic treatment would involve injections of Ivermectin. Injection using collared needles will increase the likelihood that the animal obtains a full dose of the treatment (thereby increasing effectiveness and reducing a need for a follow up dosing approach) but may cause the dart to be retained longer (with a possible increase in risk of inflammation at the injection site).**

12. Based on the pre-conditions in Section 73(3) of SARA, the proponent should specify:
(addressing a through c is mandatory for SARA species – see instructions)

a) What alternatives to the proposed method of conducting the activity have you considered? How is the chosen method the best solution to reduce impact to the species?

This whale (J50) is a known individual and is part of the Southern Resident killer whale population. Her significant decline in body condition in the past 8+ months is concerning, and she her documented decline in weight and body condition is similar to another Southern Resident killer whale that died in 2017. These activities are necessary to begin to understand the health status of this whale through increased diagnostics, and to provide the appropriate treatment using broad-spectrum antibiotics or anti-parasitics as needed to help J50 overcome infectious illnesses that may be causing or contributing to her decline.

b) What mitigation measures have been included, and how do they minimize the potential impacts on listed species and/or habitats? What mitigation measures have been considered and not included, and for what reasons were they rejected?

Mitigation measures include using highly skilled and experienced personnel for these activities with observers to monitor her and other whales. All of the proposed activities have been successfully used in the past and pose low risk. Additionally, the administration of any antibiotic or anti-parasitic treatments will be overseen by a licensed veterinarian with expertise in cetacean medicine. Impacts on other species or habitats are not anticipated.

c) Will the activities you plan to undertake jeopardize survival or recovery of the species, in light of measures in 12(a) and 12(b) above? If not, why not?

These activities will be conducted to diagnose and help an individual in an endangered population that has had a precipitous decline in body condition. Therefore, these measures will not jeopardize the recovery of the species, and may in fact enhance the population.

PART IV – SARA RECOVERY PLANNING EVALUATION

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13.	Has the proposed project/study been recommended in a SARA Recovery Strategy, Action Plan or Management plan? Please identify section. **Yes. These activities will contribute to Broad Strategy 4 in the Action Plan for the Northern and southern Resident Killer Whale (*Orcinus orca*) in Canada. Specifically, the proposed work may contribute to the investigation and monitoring of priority pathogens of concern (Table 2, line 60). Additionally, NOAA is defined as a potential partner for this specific work.**
14.	Will the proposed project/study assist in the recovery of the species identified? Please explain. **The proposed project will assist in the recovery of this endangered species. If no intervention is taken, it is likely that this individual will die. As J50 is a young female, a successful intervention would help the population as J50 would be able to contribute to the population growth. Additionally, understanding the health status of this individual, and what may be causing her decline, will be valuable, should a similar situation occur in other Southern Resident killer whales.**

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Application to conduct marine mammal emergency response activities in Canadian Waters

J50, a 4 year old endangered Southern resident killer whale, has presented in declining health. Additional background information on J50 is available upon request.

In order to better understand the health status of J50, a veterinary health assessments and sample collection are needed. These assessments and sample collection for diagnostics may be conducted in U.S. waters (all activities are currently permitted), but the success of the response would be significantly improved if the assessment and treatment could be seamless as the whales move back and forth across the border. All assessment and treatment activities in Canada will be conducted in direct consultation with DFO.

For the initial veterinary health assessment, and sample collection, the following activities are proposed:

1. Collection of breath/blow sample (we have not been able to obtain a sample large enough to complete the diagnostic tests needed)
2. Collection of fecal sample from J50 (we currently have two fecal samples from the J16 group but neither are yet confirmed to be from J50)
3. Collection of other samples opportunistically available (e.g., mucus and skin).
4. If skin discoloration is noted, collection of skin scrapings from discolored area.
5. Completion of periodic visual veterinary health assessment and photo/video documentation.
6. Providing antibiotic treatment from the NWFSC or SeaDoc (Molly B) boat via pole syringe or remote dart delivery.
7. Providing anti-parasitic treatment from the NWFSC or SeaDoc (Molly B) boat via pole syringe or remote dart delivery.
8. Use of collared needles on darts if dart continues to bounce off or fail to deliver the full dose to ensure full delivery of antibiotics and the anti-parasitic treatment.

All samples will be collected by a response team on a single close approach boat (a NOAA vessel or SeaDoc [Molly B] vessel). The composition of the team will vary depending upon the day expected to be from the list provided at the end of this document.

Additional information for each activity

1. Respiratory or breath samples will be collected via petri dishes mounted on the end of a carbon fiber pole held just over the blowhole. The vessel closely approaches the whale to within the reach of the pole (5 meters or less), perpendicular to the whale, and the pole is lowered over the blowhole to catch the expired air. Respiratory samples taken will be analyzed for potential pathogens and other health indicators using cytology, culture and molecular methods.

   RISKS:
   - Close approach could result in possible vessel strike. Mitigation measure: Experienced personnel with a vessel equipped for close approach and this type of work in killer whales.

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- Use of poles in close proximity to the whale could result in physical contact of the whale with sampling equipment. Mitigation measure: Experienced personnel with extensive experience and used successfully in the past.
- Close approach and respiratory sample collection could result in possible disturbance to other pod members. This disturbance is expected to be temporary and minimal. Mitigation measure: Experienced observers, pre and post approach monitoring; and trained observers on the vessel or support vessels to observe other whales.
- We will make note of any disturbance or behavioral changes or reactions from J50 or other whales.
- Daily debriefs with field team will provide opportunities for modifications of field operations.

2. Fecal samples will be collected opportunistically whenever possible when visually detected floating on the water. Fecal samples collected this way can yield analyses of nutrition, hormones (e.g., stress, reproductive), toxins, DNA (to identify subject whale and prey species), and diagnostic samples such as macro parasite type and load, cytology, consistency, and micro-parasites (culture). Small fecal samples will be collected on sterile gauze sealed in zip locks and placed immediately in cool storage. Larger fecal samples will be collected in tubes and immediately placed in a cooler.
   Note: while all efforts will be made to collect feces from J-50, identification of which animal defecated is not always immediately possible in the field, and any available sample will be collected and genetic identity determined later. Insights provided by the diagnostic findings of others in the pod will be informative to her results.

   RISKS:
   - Close approach provides the same risks outlined above. No additional risks are anticipated.

3. Mucus samples will be collected opportunistically whenever possible when visually detected floating on the water. Mucus samples can yield analyses of hormones, cytology, and pathogens, among others. Mucus samples will be collected on sterile gauze and placed in cold storage.
   Note: while all efforts will be made to collect mucus from J-50, identification of which animal the mucus is from may not always be immediately possible in the field, and any available sample will be collected.

   RISKS:
   - Close approach provides the same risks outlined above. No additional risks are anticipated.

4. If skin discolorations or abnormalities are observed (as has been previously noted caudal to the blowhole and on the flukes), skin samples will be obtained through a roughened collector (dish scrubbie or similar) on the end of a 5 m pole. The vessel closely approaches the whale to within the reach of the pole (5 meters or less), perpendicular to the whale, and the pole is lowered into contact with the discolored skin. Skin scrape samples will be analyzed to identify potential pathogens and cytology.

   RISKS:
   - Close approach provides the same risks outlined above. No additional risks are anticipated.
   - Contact between the sampling pole and the whale will result in minor skin abrasions, which could cause localized swelling. Impacts are expected to be short-lived and minor. Mitigation

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measure: Experienced personnel and equipment has been used successfully in the past.

5. Veterinary health assessment is conducted on-scene by an experienced killer whale veterinarian, along with photo and video documentation of the animal. This assessment will likely be conducted simultaneously with the close approaches to collect the samples listed above, and would likely not require additional approaches. Health assessment will include observations of body condition and behavior, from various marine vessels, drone observations in US waters or Canadian waters if there are operators separately licensed to operate for this purpose, and from shore (when/if possible). Photos (high resolution) and video (1080p and greater resolution) will be collected from all platforms utilized, and images will be used for comparisons and ongoing assessment as well as documenting the assessment and sampling operations. Behavioral patterns will be monitored as often as possible throughout the response. Behavioral ethograms may be developed for this purpose with a dedicated observer collecting this data for future analysis. Parameters that will be monitored and recorded include:
   - Respiratory rate (# respirations/5 minutes)
   - Blow odor
   - Defecation frequency
   - Position and distance relative to J16 (or other closely associated pod members)
   - Foraging activity; % time spent logging
   - Evidence of foraging, food consumption, or food sharing.

   RISKS:

   - Close approach provides the same risks outlined above. No additional risks are anticipated.
   - Photo documentation involves no anticipated risks.

6. Initial medical treatment via delivery of antibiotics by injection, either via pole syringe or remote delivery dart system. Injections will be administered into the epaxial or subcutaneous tissue in the epaxial area. Needle length will be approximately 2". All injections will be supervised or administered by an experienced veterinarian.
   Medications List In Order of Priority (as advised by veterinary team). The antibiotics on this list are intended to address a range of bacterial infections.

   - 2000-3000mg Convenia, SQ or IM once (600kg x 5 mg/kg) – one dose would provide 7-14 days efficacy; or
   - 2000-3000 mg Excede SQ or IM once (600kg x 5 mg/kg) – one dose would provide 5-10 days efficacy

   *Antibiotic drug choice may change based on diagnostic findings. Any new drug choices & dosages will be provided to DFO as needed prior to use.

   RISKS:
   - Close approach provides the same risks outlined above.
   - Medication injections may have side effects including result in potential abscess, localized pain and inflammation. This is expected to be temporary and localized to the injection site. More

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serious side effects such as muscle necrosis are possible but unlikely. Mitigation measure: Experienced personnel with significant experience and appropriate equipment choice.
- Excede and Convenia are both third generation cephalosporins and adverse effects have not been serious and have a relatively low frequency of occurrence.

7. Providing anti-parasitic treatment from the NWFSC or SeaDoc boat via pole syringe or remote delivery. Additional medications may be deemed necessary in her treatment and those will be discussed in advance of any deviation from those indicated. Injections will be administered into the epaxial muscle group or the subcutaneous tissue in the same area. Needle will be approximately 2" and 40mm. All injections will be supervised or administered by an experienced veterinarian. The anti-parasitic treatment is intended to address a parasite infection indicated through examination of a fecal sample collected in her vicinity.
   - 1 10 millimeter Ivermectin through 10ml dart – one time dosage (0.2 mg/kg)
   - Little to no risk to J50, Ivermectin has been given to other marine mammals without any adverse effects, however injections of 10 ml may result in localized inflammation or swelling.

8. Use of collared needles if the uncollared needle on the dart that is normally used bounces off without full delivery of antibiotics and the parasite treatment, then the veterinarians may switch to a collared needle with a ridge that holds it in place longer to deliver the full dose. This will decrease the number of approaches/darts needed and increase the probability of delivering the full dose in one shot. This type of dart is commonly used to remotely dart wildlife such as elephants and is designed to fall out and be recovered when the animal is handled. The team of veterinarians has weighed the options and concluded that the expected benefits from receiving the medications at this critical time are substantial, and the dart is likely to come out in hours to less than a day. The dart possibly remaining in the animal for a period of time may cause inflammation and swelling of the area.

RESPONSE PERSONEL

The following personnel will be involved in this response at varying points, though the exact configuration of personnel on each boat at any given time will shift depending on needs of the effort and the availability of the individuals involved.

Dr. Joe Gaydos (SeaDoc) Health assessment including diagnostics and medical treatment
Dr. Jim McBain (Sea World) Health assessment including diagnostics and medical treatment
Dr. Hendrik Nollens (Sea World) Health assessment including diagnostics and medical treatment
Dr. Martin Haulena (Vancouver Aquarium) Health assessment including diagnostics and medical treatment
Dr. Brad Hanson (NOAA) Sample collection and vessel driver
Candice Emmons (NOAA) Sample collection and vessel driver
Jeff Foster (Whale Sanctuary Project) Sample collection and vessel driver
Katy Foster (Whale Sanctuary Project) Sample collection and vessel driver
Trevor Foster (research tech) Sample collection and vessel driver

*A staff member will be identified for photo and/or video documentation.

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Mbarushimana, Jenny

From: Jenkins, Randy
Sent: August-22-18 2:17 PM
To: Davis, Neil
Subject: FW: SRKW Update Note
Attachments: MECTS-#3949687-v8-IN-Southern_Resident_Killer_Whale_Update.docx

FYI...

From: Jenkins, Randy
Sent: Wednesday, August 22, 2018 5:17 PM
To: Waddell, Mark <Mark.Waddell@dfo-mpo.gc.ca>; Patrick, Lindsey <Lindsey.Patrick@dfo-mpo.gc.ca>
Cc: Burns, Adam <Adam.Burns@dfo-mpo.gc.ca>; Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>; Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>
Subject: FW: SRKW Update Note

FYI.... Attached is today's update note on SRKW, based on the information provided by Pacific Region today.

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Southern Resident Killer Whale Update

(August 22, 2018 – 15:00 EDT)

Issues: The deteriorating health condition of Southern Resident Killer Whale (SRKW) J50 of SRKW J-pod has prompted the U.S. National Oceanic and Atmospheric Administration (NOAA) to propose an emergency action plan to treat her. The response team located J50 on Thursday, August 9th and began sampling and treatment.

Update:

- A super SRKW pod, including J-pod, K-pod and L-pod, was seen yesterday evening August 21, 2018 at 6:45pm PDT off the west coast of Vancouver Island.
    - J50 was seen with her mother J16, who was foraging, off Carmanah Point travelling towards Nitnat.
    - Visibility for killer whale observations is poor due to the smoke from BC interior fires.

- DFO received an application from NOAA to include the following treatments to J50: anti-parasitic treatment via a pole syringe or remote dart delivery, and the use of collared needles on darts to help the dart adhere to the whale.
    - DFO Science, as well as Dr. Steven Raverty (provincial marine mammal veterinarian) are reviewing the application to provide comments on the additional treatments.
    - DFO is drafting an amended Authorization to Disturb Marine Mammals to include these treatment options if supported.
    - Currently, NOAA is authorized to conduct sampling of J50, including breath, fecal, mucus and skin; visual veterinary health assessment; and provide antibiotic treatment via pole syringe or remote delivery under the Authorization to Disturb Marine mammals pursuant to section 38 of the *Marine Mammal Regulations*, in addition to provisions under section 52 of the *Fisheries (General) Regulations* and section 74 of *Species at Risk Act* that was issued on August 9th.
- J35 was seen on Saturday August 11th travelling without her dead calf.

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Mbarushimana, Jenny

From: Jones, Lisa Ann
Sent: August-23-18 4:09 PM
To: Brekke, Heather
Subject: RE: BC Response to Section 7 (Critical Habitat) of the Amended RS for SRKW and NRKW
Attachments: RKW_SARCC_response to comments_20Aug18_hb_tracked.docx

Hi Heather,

I have made the edits to the document and saved with tracked changes – the file can be found here for your review (attached as well as may be easier to access for you as you are working from home tomorrow).

Once you are OK with the reply I will look to draft the email to send – think will have to come from Karen (whoever acting).

Cheers
Lisa

From: Brekke, Heather
Sent: August-21-18 11:15 AM
To: Jones, Lisa Ann
Subject: RE: BC Response to Section 7 (Critical Habitat) of the Amended RS for SRKW and NRKW

From: Jones, Lisa Ann
Sent: August-21-18 10:57 AM
To: Brekke, Heather
Subject: RE: BC Response to Section 7 (Critical Habitat) of the Amended RS for SRKW and NRKW

That is OK – whatever is most efficient. We can walk through these at our bilat if best or we can do so this morning if you have time.

From: Brekke, Heather
Sent: August-21-18 10:56 AM
To: Jones, Lisa Ann
Subject: RE: BC Response to Section 7 (Critical Habitat) of the Amended RS for SRKW and NRKW

Hi Lisa,

I have a few suggestions, but it may be quicker to just walk through them. Would you prefer them in writing?

Heather

From: Jones, Lisa Ann
Sent: August-20-18 9:30 PM
To: Brekke, Heather
Subject: FW: BC Response to Section 7 (Critical Habitat) of the Amended RS for SRKW and NRKW
Importance: High

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Hi Heather,

Please find attached the responses to the comments from the Province for your review. I sought input from Jeff on a few items and Sharlene and Christie have provided some input as well.

In general, there were concerns over information within Section 7 not being specific/detailed enough; responses provided clarify the intent of the content within this section. There were also a number of comments around cumulative effects.

Once you have reviewed, I will incorporate edits and send along to Jonathan with a cover letter for him to send back using language from other response letters.

To my knowledge, no further responses for the external review process are pending after this.

Cheers
Lisa

From: Brekke, Heather
Sent: July-19-18 8:18 AM
To: Jones, Lisa Ann; Shaikh, Sharlene
Subject: FW: BC Response to Section 7 (Critical Habitat) of the Amended RS for SRKW and NRKW
Importance: High

From: Leslie, Karen
Sent: July-19-18 8:17 AM
To: Brekke, Heather
Cc: Fershau, Jonathan
Subject: FW: BC Response to Section 7 (Critical Habitat) of the Amended RS for SRKW and NRKW

Here is BC's formal response

Karen Leslie
604-666-0395

From: Welsh, Leah ENV:EX [mailto:Leah.Welsh@gov.bc.ca] **On Behalf Of** Dale, Alec R ENV:EX
Sent: 2018–July-19 8:01 AM
To: PAC-SARA / LEP-PAC (DFO/MPO); Webb, Cheryl
Cc: Dolhaine, Daphne ENV:EX; Dale, Alec R ENV:EX; Leslie, Karen; Rasmussen, Paul FLNR:EX; Helen Davies
Subject: BC Response to Section 7 (Critical Habitat) of the Amended RS for SRKW and NRKW

Dear Ms. Webb,

Thank you for the opportunity to review Section 7 of the ***Amended Recovery Strategy for Northern and Southern Resident Killer Whales [Draft]***. Potentially affected ministries within the BC government had an opportunity to review and comment on the amended recovery strategy.

Specific comments have been attached in regards to Section 7 of the amended Recovery Strategy and does include some general comments on the Recovery Strategy as a whole.

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I would like to start by recognizing the effort that DFO has made to consult with the province of British Columbia (BC) throughout the development of this draft amended recovery strategy. We have reviewed Section 7, as per the External Review Request, June 12, 2018, and have provided comments (attached) for consideration. The Province would appreciate a response as to how these comments have been considered/addressed in the Amended Recovery Strategy.

The province of British Columbia supports a transparent, science-based process for the identification of habitat required for a species' survival or recovery, where habitat protection decisions are informed by science and the evaluation of socio-economic considerations, full consultation with all directly affected parties has been completed, and all significant concerns have been addressed.

The Ministry of Environment and Climate Change Strategy, on behalf of the BC Government, accepts the proposed Section 7 of the amended Recovery Strategy including Critical Habitat identification as **Science Advice**, but we **do not support implementation of legal habitat protection measures** without evaluation of socio-economic implications and **full consultation with directly affected parties**.

To assist with provincial decision-making around subsequent protection, the province of BC encourages DFO to ensure that the relevant spatial and management information relating to proposed critical habitat is made readily available to statutory decision makers, for example through FrontCounter BC.

Side note – the request for this review came through a variety of avenues to the Province. Please ensure any review requests for the Province are directed to the Recovery Planning Coordinator (Karen.Stefanyk@gov.bc.ca), to ensure comprehensive, consolidated and timely review by all potentially affected ministries. The Province of British Columbia has a strong working relationship with our federal colleagues and have used and communicated this process with other departments of DFO.

Regards,

Alec Dale
Executive Director, Ecosystems Branch
Ministry of Environment and Climate Change Strategy
Mailing: PO Box 9338 Stn. Prov. Govt. Victoria, BC V8W 9M1
Courier: 4th Floor, 525 Superior St, Victoria BC V8V 1T7
Tel: 778-698-4384
Fax: 250-387-9750
Email: alec.dale@gov.bc.ca

From: PAC-SARA / LEP-PAC (DFO/MPO) [mailto:SARA.XPAC@dfo-mpo.gc.ca]
Sent: Tuesday, June 12, 2018 3:15 PM
Subject: External review consultations: critical habitat section of the draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada

Dear SARCC Members,
Please find attached information regarding the Fisheries and Oceans Canada / Parks Canada Agency external review of the critical habitat section (section 7) of the Species at Risk Act draft Amended Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada.
Please distribute this notice and attachments to any other individuals or organizations you believe may be interested in this review.

If you have received this message in error please notify us, and we will ensure your contact information is removed from our distribution list.
Thank you,
Species at Risk Program
Pacific Region

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Fisheries and Oceans Canada
200-401 Burrard Street, Vancouver BC V6C 3S4
Telephone: 604-666-7907
Facsimile: 604-666-0417

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

REVIEW:

Name of Reviewer (Affiliation): The Province of British Columbia - Charlie Short (Ministry of Forest, Lands, Natural Resource Operations and Rural Development [FLNR]); Ron Ptolemy (Ministry of Environment and Climate Change Strategy [ENV)]); Karen Stefanyk (ENV); Ben Clark & Amber Mattock (Tourism Branch, Ministry of Tourism, Arts and Culture [TAC]); Stephen Ban (BC Parks, [ENV]); Alanya Smith (Ministry of Indigenous Relations and Reconciliation [MIRR]), Larry Neilson and Michael Turner on (on behalf of the Ministry of Agriculture [AGRI])

Date of Review: July 18, 2018

General Comments:

- B.C. commends the federal government for their efforts to address the destruction of critical habitat for RKW
- Consistent with our bilateral conversations through the Oceans Coordinating Committee (OCC) and the Regional Committee on Oceans Management (RCOM), and other BC/DFO venues, B.C. requests that the federal government continue to engage with us on initiatives related to Southern RKW and ensure the opportunity to provide feedback in a meaningful way is provided.
- The Province of British Columbia and its associated Ministries would like to stay informed regarding the research underway, so we can proactively work with our industry stakeholders and the public to anticipate any changes in operating procedures or regulations that may result from the research findings.

s.21(1)(a)

s.21(1)(b)

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review
SPECIFIC COMMENTS

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
Charles Short [FLNR]	s. 7	Cumulative impacts of activities that may affect critical habitat components are not discussed enough or at all – this is an important consideration given the amount current and historical impacts to KW habitat. a. Refinement of mitigation measures spatially would benefit from more comprehensive cumulative impacts type analyses.		

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s.21(1)(a)

s.21(1)(b)

Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
Charles Short [FLNR]	s. 7	Access to rubbing beaches are identified as a key function for NRKWs in identified critical habitat yet they can be discretely spatially identified – why not be more explicit on location. It seems that legal protection for identified sites with specific regulations would be most effective in these areas and could be implemented on a priority basis.		
Charles Short [FLNR]	s. 7	Prey availability is another element of critical habitat that is clearly a high priority although only fishing is explicitly identified as a threat. Would be more useful to itemize all activities that are detrimental to salmon habitat, population units / stocks, by species and area. Mitigation and protective measure would be more easily identified and implemented.		
Charles Short [FLNR]	s. 7	Limited identification of terrestrial impacts to critical aquatic habitat – unclear as to what the extent of potential impacts of implementing the		

s.21(1)(a)

s.21(1)(b)

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
		recovery strategy would be in this regard (e.g., forestry, urban planning and effluent regulations, shoreline / coastal development, tourism)		
Charles Short [FLNR]	s. 7	Given that SRKW identified critical habitat is in the most impacted, heavily populated and intensely utilized marine environment in the province that all identified features, functions and attributes (except rubbing beaches) exist it may be useful to prioritize areas within to assist in implementation and mitigate impacts to socio-economic values that would be identified as impacting (i.e., destroying) aquatic critical habitat as defined.		

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s.21(1)(a)

s.21(1)(b)

Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
Ronald A. Ptolemy, R.P.Bio.	s 7	Last review by Ptolemy completed in 2008 with stated concerns over unknown weighting by stressor to the persistence of healthy populations. Table 6 (current draft) is a good start to identifying stressors but is incomplete and has no science weighting as to what is really important to act on.		
Ronald A. Ptolemy, R.P.Bio.	s 7	There is no indication of the relative risk of various stressors between the Northern and Southern populations. For example if the Northern population is classed as healthier than the Southern population in terms of reproductive rate or mortality rate, both populations are subject to marine noise conditions so is under-water noise a common characteristic that is of lower concern for mitigative actions? Johnstone Strait is a very noisy place with many outboard motors operating as detected through hydrophones each year. Any noisier than Strait of		

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s.21(1)(a)

s.21(1)(b)

Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
		Juan de Fuca or Puget Sound?		
Ronald A. Ptolemy, R.P.Bio.	s 7	If legal approach distances (200m) are the same during the busy summer months for both groups of Orca, is distance constraints a big issue?		

s.21(1)(a)

s.21(1)(b)

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
Ronald A. Ptolemy, R.P.Bio.	s 7	It seems autopsy reports of dead Orca from the Southern Population Group show high levels of toxins and contaminants more so than for Northern Population, why does Table 6 not address this important issue. Providing more forage fish (chinooks and chum) may not be a holistic solution.		
Ronald A. Ptolemy, R.P.Bio.		Is there a simple graphic that shows aerial frequency (use of drones) of poorly conditioned Orca differences between the two target groups? Could not find this information in the supplied material.		
Ronald A. Ptolemy, R.P.Bio	S 7	What efforts are being made to manage chinook fisheries to ensure sufficient spawner numbers are available to fill the freshwater capacity of rivers used by the salmon species for reproduction and rearing? This is not captured well in Table 6.		

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s.21(1)(a)
s.21(1)(b)

Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
AGRI	General	There are potential implications for the Province, specifically around environmental contaminants, nearshore use (planning, industrial development), tourism and recreational fishing and shipping/ports		
AGRI	General	AGRI has an interest in the RKW file from a commercial and recreational fisheries perspective. Chinook salmon are the primary food source for southern RKW's and recent recovery measures have led to reductions in fishing opportunities for that species.		

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s.21(1)(a)

s.21(1)(b)

Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
AGRI / ALL	General	As GOC goes forward with planning and implementation of measure to protect SRKW and chinook and chum as prey species, B.C. seeks a clear, and open and transparent consultation process with FN, stakeholders and the B.C.		
TAC	General	Because whale watching and sport fishing are tourism activities that fall under federal jurisdiction, there are limited management implications for the Province with respect to tourism specifically. Where the Province could play a proactive role is helping to promote responsible environmental guidelines and operating procedures in these industries. This aligns well with other work being done with the Adventure Tourism Coalition members with respect to heli-skiing and bear viewing. Many whale watching operators on the B.C. coast are part of the Pacific Whale Watch Association – here are their voluntary guidelines: https://www.pacificwhalewatchassociation.com/guidelines/	Low – FYI	
TAC	General – on-going communications	[The BC Government] Tourism Branch would like to stay informed regarding the research underway, so we can proactively work with our industry stakeholders and the public to anticipate any changes in operating procedures or regulations that may result from the research findings.	Low – Communication	
TAC	Socio-economic impact assessment	Southern Vancouver Island is a popular tourism destination for whale watching and restrictions could have economic impacts on the businesses operating within critical habitat areas. The 200 meter		

s.21(1)(a)
s.21(1)(b)
s.69(1)(g) re: (f)

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
		restriction will impact business operations and visitor experience – of which whale watching is a key motivating factor to trip planning in B.C.		
TAC		***Question:*** Are there opportunities for whale watching operators to get closer than 200 meters if they use alternate sources of power?		
BC Parks		**RE: Potential Management Implications in Robson Bight** 1) Even though it's a designated ecological reserve, the [P]rprovince has no authority or enforcement powers to prevent vessels (powered or not) from entering the reserve. For this		

s.21(1)(a)
s.21(1)(b)

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
		and other joint provincial-federal initiatives, having a Memorandum of Understanding (MoU) allowing provincial staff to enforce areas of federal jurisdiction would be a great step forward. [*The Province did note that there is a warden program in place that educates people in the area*]. 2) DFO itself continues to conduct test fisheries in and around the reserve waters, which at the very least looks terrible from a public relations standpoint even if it doesn't materially affect prey availability.		
Alanya Smith [MIRR]	General – First Nations Consultations	[In reviewing the amended recovery strategy and materials provided] there is no explicit mention of engagement that the federal government may have undertaken with Indigenous communities and governments with territories on the coast. B.C. is aware of the strong interests that coastal First Nations have in the health of the marine environment. In consideration of Canada and B.C.'s commitments to implement the UN Declaration on the Rights of Indigenous Peoples, B.C. encourages the federal government to undertake meaningful engagement with coastal First Nations in the development of the amended recovery strategy and in the communication of its final form and around its implementation.		

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
				document.

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Khanna, Sukriti

From: Brekke, Heather
Sent: August-23-18 3:12 PM
To: Jones, Lisa Ann
Cc: Fershau, Jonathan; Kenyon, Robyn
Subject: FW: PLEASE REGISTER AND FOR ACTION: Emergency protections for Southern Resident Killer Whales
Attachments: 2018 08 20 Letter from Ecojustice to Ministers and Deputy Ministers re SRKW.pdf; 2018 07 16 - Letter from Ecojustice to Ministers and Deputy Ministers - ....pdf

Importance: High

Fyi.

Jonathan and Robyn, CCing you here as FYI as actors for Karen. No action required.

-----Original Message-----
From: Webb, Cheryl
Sent: August-23-18 3:08 PM
To: Thomson, Andrew; Leslie, Karen; Davis, Neil; Brekke, Heather; Harber, Lee
Subject: FW: PLEASE REGISTER AND FOR ACTION: Emergency protections for Southern Resident Killer Whales
Importance: High

FYI, another letter from EcoJustice

From: Paravan, Dora
Sent: Tuesday, August 21, 2018 9:48 AM
To: Rascanin, Natasha <natasha.rascanin@tc.gc.ca<mailto:natasha.rascanin@tc.gc.ca>>; Dick, Robert <Robert.Dick@tc.gc.ca<mailto:Robert.Dick@tc.gc.ca>>; Corbin, Claude <claude.corbin@tc.gc.ca<mailto:claude.corbin@tc.gc.ca>>; Sookhdeo, Zahira <zahira.sookhdeo@tc.gc.ca<mailto:zahira.sookhdeo@tc.gc.ca>>; Hanson, Lawrence <lawrence.hanson@tc.gc.ca<mailto:lawrence.hanson@tc.gc.ca>>; Nichols, Megan <Megan.Nichols@tc.gc.ca<mailto:Megan.Nichols@tc.gc.ca>>
Cc: TC.F NCR AO ADMO / AO BSMA RCN F.TC <TC.NCRAOADMO-AOBSMARCN.TC@tc.gc.ca<mailto:TC.NCRAOADMO-AOBSMARCN.TC@tc.gc.ca>>; DL OTT AC ADMO / AC BSMA LD OTT (TC/TC) <TC.dlottacadmo-acbsmaldott.TC@tc.gc.ca<mailto:TC.dlottacadmo-acbsmaldott.TC@tc.gc.ca>>; TC.F NCR XM Deputy Minister's Office / Bureau du sous-ministre XM RCN F.TC <TC.NCRXMDeputyMinistersOffice-BureaudusousministreXMRCN.TC@tc.gc.ca<mailto:TC.NCRXMDeputyMinistersOffice-BureaudusousministreXMRCN.TC@tc.gc.ca>>
Subject: FW: PLEASE REGISTER AND FOR ACTION: Emergency protections for Southern Resident Killer Whales

Good morning,

For your awareness, this correspondence is being registered and will require a response.

Thank you!

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Dora Paravan
Executive Assistant to the Deputy Minister | Adjointe exécutive au Sous-ministre Transport Canada | Transports Canada
Place de Ville, Tower C | Place de Ville, Tour C
330 Sparks Street, 29th Floor | 330, rue Sparks, 29e étage Ottawa, Ontario, Canada K1A 0N5
dora.paravan@tc.gc.ca<mailto:lise.dagenais@tc.gc.ca>
Telephone | Téléphone 613-990-4507 / Facsimile | Télécopieur 613-991-0851 Government of Canada | Gouvernement du Canada

From: Paravan, Dora
Sent: Monday, August 20, 2018 2:35 PM
To: XM Documents / Documents XM (TC/TC) <tc.xmdocuments-documentsxm.tc@tc.gc.ca<mailto:tc.xmdocuments-documentsxm.tc@tc.gc.ca>>
Cc: TC.F NCR XM Deputy Minister's Office / Bureau du sous-ministre XM RCN F.TC <TC.NCRXMDeputyMinistersOffice-Bureaudusous-ministreXMRCN.TC@tc.gc.ca<mailto:TC.NCRXMDeputyMinistersOffice-Bureaudusous-ministreXMRCN.TC@tc.gc.ca>>
Subject: PLEASE REGISTER AND FOR ACTION: Emergency protections for Southern Resident Killer Whales

Dora Paravan
Executive Assistant to the Deputy Minister | Adjointe exécutive au Sous-ministre Transport Canada | Transports Canada
Place de Ville, Tower C | Place de Ville, Tour C
330 Sparks Street, 29th Floor | 330, rue Sparks, 29e étage Ottawa, Ontario, Canada K1A 0N5
dora.paravan@tc.gc.ca<mailto:lise.dagenais@tc.gc.ca>
Telephone | Téléphone 613-990-4507 / Facsimile | Télécopieur 613-991-0851 Government of Canada | Gouvernement du Canada

From: Dyna Tuytel [mailto
Sent: Monday, August 20, 2018 1:31 PM
To: Blewett, Catherine <Catherine.Blewett@dfo-mpo.gc.ca<mailto:Catherine.Blewett@dfo-mpo.gc.ca>>; Margot Venton <mailto: min@dfo-mpo.gc.ca<mailto:min@dfo-mpo.gc.ca>; 'ec.ministre-minister.ec@canada.ca' <ec.ministre-minister.ec@canada.ca<mailto:ec.ministre-minister.ec@canada.ca>>
Cc: stephen.lucas@canada.ca<mailto:stephen.lucas@canada.ca>; Keenan, Michael <michael.keenan@tc.gc.ca<mailto:michael.keenan@tc.gc.ca>>; Olivia French <; Betty Gabel ; species@georgiastrait.org<mailto:species@georgiastrait.org>; Jeffery Young ; Scott Wallace Jasny, Michael >; Hussein Alidina >; Paul C. Paquet >; Misty MacDuffee Ross Dixon Minister of Transport / Ministre des Transports (TC) <TC.MinisterofTransport-MinistredesTransports.TC@tc.gc.ca<mailto:TC.MinisterofTransport-MinistredesTransports.TC@tc.gc.ca>>; marlo.raynolds@canada.ca<mailto:marlo.raynolds@canada.ca>; McCloskey, Shane <shane.mccloskey@tc.gc.ca<mailto:shane.mccloskey@tc.gc.ca>>; mark.knudsen@dfo-mpo.gc.ca<mailto:mark.knudsen@dfo-mpo.gc.ca>
Subject: RE: Emergency protections for Southern Resident Killer Whales

Dear Ministers Wilkinson and McKenna and Deputy Ministers Blewett, Lucas and Keenan,

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Please find attached a letter on behalf of the David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation and WWF-Canada in response to the Deputy Ministers' July 24 email and the July 30 Imminent Threat Assessment for Southern Resident Killer Whales. For convenience I have also attached our previous letter of July 16, which we refer to in today's letter.

Sincerely,

Dyna Tuytel and Margot Venton

Dyna Tuytel
Barrister & Solicitor | Ecojustice<http://www.ecojustice.ca/>
800-744 4th Avenue SW, Calgary, AB T2P 3T4
T: 403-705-0202 | 1-800-926-7744 ext. 307
F: 403-452-6574

Ecojustice is Canada's largest environmental law charity. Help us build the case for a better earth.<https://www.support.ecojustice.ca/ea-action/action?ea.client.id=1943&ea.campaign.id=42200&ea.tracking.id=Outlook>

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From: Wallace, Dorothy [mailto:Dorothy.Wallace@dfo-mpo.gc.ca] On Behalf Of Blewett, Catherine
Sent: Tuesday, July 24, 2018 3:10 PM
To: Dyna Tuytel < Margot Venton
Cc: stephen.lucas@canada.ca<mailto:stephen.lucas@canada.ca>; michael.keenan@tc.gc.ca<mailto:michael.keenan@tc.gc.ca>
Subject: RE: Emergency protections for Southern Resident Killer Whales

Dear Ms. Tuytel and Ms. Venton:

We appreciate your continued interest in the important issue of Southern Resident Killer Whale (SRKW) conservation. In response to your recent letter, dated July 16, 2018 we also understand that you are anxious for confirmation that the Ministers will be making a recommendation to Cabinet for an emergency order.

The Ministers are respecting their obligations under the Species at Risk Act. Having formed the opinion that the SRKW face an imminent threat to both their survival and recovery, as required under s. 80(2), the Ministers are considering whether equivalent measures have been taken under another Act of Parliament, pursuant to s. 81.

As you are aware, many measures have already been implemented to address key threats associated with prey availability and acoustic and physical disturbance, and we are in the process of identifying and protecting additional areas of critical habitat. As stated in the July 6, 2018 letter to Ecojustice, the Ministers are currently determining whether or not existing measures are providing adequate protection to allow for survival and recovery of the Southern Residents and are moving through this process in a timely manner.

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On July 30, 2018 we will hold the inaugural meeting of the new Indigenous and Multi-stakeholder group on Southern Resident Killer Whales, which includes all five of your clients. This forum will be an important ongoing opportunity for future discussions on protection of the Southern Residents.

The Government of Canada is fully committed to managing the threats impacting these whales and to their survival and recovery.

Yours sincerely,

Stephen Lucas
Deputy Minister of Environment and Climate Change

Catherine Blewett
Deputy Minister of Fisheries and Oceans Canada

Michael Keenan
Deputy Minister of Transport Canada

On behalf of,

The Honourable Jonathan Wilkinson, P.C., M.P.

Minister of Fisheries, Oceans and the Canadian Coast Guard

The Honourable Marc Garneau, P.C., M.P.

Minister of Transport

The Honourable Catherine McKenna, P.C., M.P.

Minister of Environment and Climate Change

From: Dyna Tuytel [mailto:
Sent: July-16-18 6:46 PM
To: Minister / Ministre (DFO/MPO); 'ec.ministre-minister.ec@canada.ca'; Blewett, Catherine; stephen.lucas@canada.ca<mailto:stephen.lucas@canada.ca>; michael.keenan@tc.gc.ca<mailto:michael.keenan@tc.gc.ca>
Cc: Margot Venton; Olivia French; Betty Gabel; Jeffery Young; Scott Wallace; Christianne Wilhelmson; Rachael Merrett; Jasny, Michael; Misty MacDuffee; Paul C. Paquet; Ross Dixon; Hussein Alidina; tc.ministeroftransport-ministredestransports.tc@tc.gc.ca<mailto:tc.ministeroftransport-ministredestransports.tc@tc.gc.ca>; marlo.raynolds@canada.ca<mailto:marlo.raynolds@canada.ca>; shane.mccloskey@tc.gc.ca<mailto:shane.mccloskey@tc.gc.ca>
Subject: Emergency protections for Southern Resident Killer Whales

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Dear Ministers LeBlanc and McKenna and Deputy Ministers Blewett, Lucas and Keenan,

Please find attached a letter on behalf of the David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation and WWF-Canada in response to the Ministers' letter of July 6 and recent announcements concerning Southern Resident Killer Whales.

Sincerely,

Dyna Tuytel and Margot Venton

Dyna Tuytel
Barrister & Solicitor | Ecojustice<http://www.ecojustice.ca/>
800-744 4th Avenue SW, Calgary, AB T2P 3T4
T: 403-705-0202 | 1-800-926-7744 ext. 307
F: 403-452-6574

Ecojustice is Canada's largest environmental law charity. Help us build the case for a better earth.<https://www.support.ecojustice.ca/ea-action/action?ea.client.id=1943&ea.campaign.id=42200&ea.tracking.id=Outlook>

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VANCOUVER CALGARY TORONTO OTTAWA HALIFAX

ecojustice

Dyna Tuytel and Margot Venton
800, 744 – 4 Avenue SW
Calgary, AB T2P 3T4
Telephone: (403) 705-0202
Fax: (403) 452-6574
E-Mail: [redacted]

File No: 524

August 20, 2018

Via E-mail: min@dfo-mpo.gc.ca

The Honourable Jonathan Wilkinson
Minister of Fisheries and Oceans

Via E-mail: ec.ministre-minister.ec@canada.ca

The Honourable Catherine McKenna
Minister of Environment and Climate Change and Minister Responsible for Parks Canada

Via E-mail: catherine.blewett@dfo-mpo.gc.ca

Catherine Blewett
Deputy Minister of Fisheries and Oceans

Via E-mail: stephen.lucas@canada.ca

Stephen Lucas
Deputy Minister of Environment and Climate Change Canada

Via E-mail: michael.keenan@tc.gc.ca

Michael Keenan
Deputy Minister of Transport Canada

Dear Ministers Wilkinson and McKenna and Deputy Ministers Blewett, Lucas and Keenan:

Re: Emergency measures to protect endangered Southern Resident Killer Whales ("SRKW")

We are legal counsel for the David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation and World Wildlife Fund – Canada (the "Petitioners").

We welcome Minister Wilkinson to this file, and we trust that our correspondence with his predecessor, Minister Leblanc, on this issue has been made available to him.

We are in receipt of the Deputy Ministers' email of July 24, 2018 in which they state that:

> The Ministers are respecting their obligations under the *Species at Risk Act*. Having formed the opinion that the SRKW face an imminent threat to both their survival and recovery, as required under s. 80(2), the Ministers are considering whether equivalent measures have been taken under another Act of Parliament, pursuant to s. 81.
> As you are aware, many measures have already been implemented to address key threats associated with prey availability and acoustic and physical disturbance, and we are in the process of identifying and protecting additional areas of critical habitat. As stated in the July 6, 2018 letter to Ecojustice, the Ministers are currently determining whether or not existing measures are

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providing adequate protection to allow for survival and recovery of the Southern Residents and are moving through this process in a timely manner.

As the Petitioners noted in their July 16, 2018 letter, many of the "many measures" that the Deputy Ministers allude to in their July 24 email are, in fact, not yet in place, not happening urgently, and/or lacking timelines altogether. Many are research initiatives as opposed to emergency measures. The draft amended description of critical habitat is highly flawed and could actually undermine critical habitat protection. Only the partial fishery closures and the amendments to the Marine Mammal Regulations are mandatory measures taken under Acts of Parliament. With respect to enforcement, the Petitioners continue to regularly observe violations of the 200m approach distance and they understand that recreational fishers are violating or intend to violate the fishery closures.

Rather than repeat the Petitioners' concerns raised in their July 16 letter (concerning gaps between measures announced and measures needed, the proposed changes to critical habitat in the recovery strategy, the amended Marine Mammal Regulations, and the lawfulness of the Ministers' approach to this issue), which have not been addressed, the Petitioners write to address two new developments: the July 30 Imminent Threat Assessment, and the ongoing crisis involving members of J-pod.

1. Imminent Threat Assessment

First, the Petitioners have reviewed the Imminent Threat Assessment ("ITA") released on July 30, 2018. The ITA makes it clear that "equivalent measures" pursuant to s. 81 of the *Species at Risk Act* ("SARA") have not been taken.

The ITA highlights the fact that the government could be using expedited processes but is using slower, normal processes:

- The ITA acknowledges (at page 2) that "imminent threat could be considered such that decisions and actions are required to be made on a more expedited timeframe than would normally be required through 'normal' processes. Specifically, 'normal' processes, for example, for the protection of critical habitat, would follow typical legislative timelines and provide time and opportunity for comprehensive consultations on proposed actions." Instead of expediting actions, the government has chosen to follow the "normal" process.
- The ITA states (at page 2) that "recovery actions should be taken as they are identified", then reveals that multiple identified actions are not being taken.

The ITA also highlights that the measures taken to date are not adequate to address the threats that informed the Ministers' "imminent threats" determination. For example, the ITA acknowledges (at page 20) that "[t]he effectiveness of the proposed salmon fishery measures will depend upon the broad efforts designed to reduce the physical and acoustic disturbance in key foraging areas to the extent possible." It is clear from the ITA that such efforts are missing, which undermines the effectiveness of the partial fishery closures.

The ITA further highlights a lack of timelines for measures. For example:

- The ITA states (at page 21) that Transport Canada is proposing amendments to the *Canada Shipping Act*. However, no timeline for amending the *Canada Shipping Act* is provided, and it is not clear that amendments will occur within this government's mandate.
- The ITA's description of actions to address environmental contaminants (at pages 22-24) is vague in terms of what the plans are and the timelines for those plans.

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The ITA underscores the need for urgent action. For example, it states (at page 19) that "it is unlikely the population will increase unless the body condition of the SRKW population improves." Action to immediately improve SRKW's access to Chinook salmon is necessary to improve their body condition in the short term so that they can survive and recover in the long term.

The ITA states (at page 24) that "[g]iven the long life-span of the species, recovery is a long-term goal and effects of reducing the threats on the population to ensure survival and advance recovery would not occur over the short term." However, the long lifespan of SRKW does not mean that there is more time to ensure survival and advance recovery. The ITA addresses the importance of maintaining sustainable demographics within the population (at pages 16-17), and the long calving interval documented in the ITA and the lack of any successful calves in the last three years make it urgent that conditions improve so that the SRKW can resume successfully reproducing before it is too late. Otherwise, a long lifespan just means that extinction will occur over a long timeframe as the Southern Residents slowly die out.

2. Recent developments concerning J-pod members J35 and J50

The second development since our last correspondence is the current well-known situation in the Southern Resident population. A female orca (J35) gave birth to a calf on July 24 that lived for only approximately half an hour.[1] She then carried her dead calf for an unprecedented 17 days, until August 11, in a display of what experts characterized as grief or mourning.[2] The story was well-publicized and has captured the public's attention locally, nationally and internationally.[3]

Meanwhile, a 4-year-old female calf (J50) – a crucial future contributor to the population if she survives to adulthood and successfully reproduces – is severely emaciated and may not survive.[4] Fisheries and Oceans Canada ("DFO") researchers have been tracking her in an effort to learn more about her condition.[5] The National Oceanic and Atmospheric Administration has taken unprecedented and experimental hands-on measures to provide J50 with medical treatment in the wild and to attempt to feed her in the wild, in an attempt to prolong her life.[6] DFO issued permits so that medical treatment could be administered in Canadian waters if necessary.[7] These desperate and unprecedented measures are indicative of this being a desperate time for this population. DFO's support for invasive emergency treatment of an individual whale in an effort to maintain a population with future reproductive potential underscores how precarious the population is at this time, the fact that existing measures are inadequate to ensure survival and recovery, and the need for strong and urgent measures for the population as a whole.

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[1] See NOAA website: http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/updates-j50-j35.html

[2] See, for example: https://www.cbc.ca/news/canada/british-columbia/killer-whale-orca-calf-1.4767917

[3] The story became a daily topic in the Seattle Times and has been reported on regularly by the CBC, and covered internationally in publications including in the New York Times and The Guardian: https://www.seattletimes.com/seattle-news/environment/researchers-searched-all-day-for-grieving-orca-mother-they-found-her-still-clinging-to-calf; https://www.nytimes.com/2018/08/04/opinion/sunday/the-orca-her-dead-calf-and-us.html?action=click&pgtype=Homepage&clickSource=story-heading&module=opinion-c-col-right-region&region=opinion-c-col-right-region&WT.nav=opinion-c-col-right-region; https://www.theguardian.com/environment/2018/jul/27/orca-mother-carries-dead-baby-washington-canada

[4] See, for example: https://www.ctvnews.ca/sci-tech/scientists-race-to-find-and-treat-ailing-killer-whale-off-vancouver-island-1.4043335; https://www.cbc.ca/news/canada/british-columbia/u-s-and-canadian-agencies-partner-to-aid-struggling-orca-in-b-c-coastal-waters-1.4774106

[5] See, for example: https://www.timescolonist.com/news/local/dfo-crews-spot-orca-ailing-but-still-alive-1.23393145

[6] NOAA has provided ongoing updates on its website: http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/updates-j50-j35.html

[7] See https://www.cbc.ca/news/canada/british-columbia/j-50-killer-whale-treatment-1.4780610

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Fisheries and Oceans Canada (and specifically regional director general Andrew Thomson) has been quoted in the media advising vessels "to stay well away from J50 and her pod" and as saying that "he'd like to see vessels stay 500 metres away."[8] This further indicates that the existing measures are inadequate to protect the Southern Residents from the imminent threats to their survival and recovery.

To date, the Ministers have been notably silent on these events. While DFO employees have been quoted in the media, the department has not provided any formal updates.

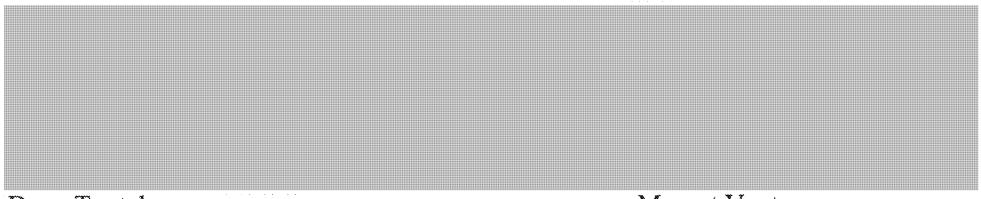
All eyes are on the Southern Residents and this ongoing crisis, and the government's next steps – or lack thereof – will be watched closely.

It appears from the Deputy Ministers' July 24 email that the Ministers prefer to communicate with the Petitioners through the new Indigenous and multi-stakeholder group that will discuss protection of the Southern Residents on an ongoing basis. The Petitioners attended the inaugural meeting on July 30, 2018 and are participating in good faith but do not expect this committee to yield real results in a timely manner due to its timing and the makeup. This forum is starting late in the day and lacks urgency. No date has yet been set for the next meeting. Furthermore, the participants do not include scientists. The current situation is an emergency that requires urgent measures and efforts led by experts. The time for bargaining between stakeholders has passed.

Since the Ministers' May 22 "imminent threat" determination, the situation for the Southern Residents has deteriorated further. The actions taken have not been commensurate with the imminent threats, and the government's own ITA has now confirmed this. Effective emergency measures are needed, and it is the Petitioners' opinion that an emergency order is the best and most practical way to implement them on an urgent basis. It is also the Petitioners' opinion that the ongoing lack of an emergency order or equivalent measures under SARA – and the indefinite and unexplained delay – is unlawful.

If the Ministers do not take action to protect the Southern Residents as required under s. 80 of SARA, the Petitioners may be forced to take legal action.

Sincerely,



Dyna Tuytel
Barrister & Solicitor

Margot Venton
Barrister & Solicitor

c. David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation, World Wildlife Fund – Canada
The Honourable Marc Garneau, Minister of Transport
Marlo Raynolds, Chief of Staff to the Minister of Environment and Climate Change
Shane McCloskey, Senior Policy Advisor, Transport Canada
Mark Knudsen, Policy Advisor – Pacific, Fisheries and Oceans Canada

[8] See https://www.timescolonist.com/young-west-coast-orca-in-a-tough-slog-to-keep-up-with-her-pod-experts-1.23398220 and https://www.cbc.ca/news/canada/british-columbia/j-50-killer-whale-treatment-1.4780610.

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July 16, 2018

Via E-mail: min@dfo-mpo.gc.ca

The Honourable Dominic LeBlanc
Minister of Fisheries and Oceans

Via E-mail: ec.ministre-minister.ec@canada.ca

The Honourable Catherine McKenna
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Stephen Lucas
Deputy Minister of Environment and Climate Change Canada

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Michael Keenan
Deputy Minister of Transport Canada

Dear Ministers LeBlanc and McKenna and Deputy Ministers Blewett, Lucas and Keenan:

Re: Emergency measures to protect endangered Southern Resident Killer Whales

We are legal counsel for the David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation and World Wildlife Fund Canada (the "Petitioners").

As you know, on January 30, 2018 the Petitioners sent the Minister of Fisheries and Oceans and Environment and Climate Change (the "Ministers") a petition (the "Petition") for an emergency order for the Southern Resident Killer Whales ("Southern Residents") pursuant to section 80 of the *Species at Risk Act* ("SARA"). The Petition identified a number of urgently needed measures that could be implemented without delay, through an emergency order, to provide protections for the Southern Residents in the 2018 season.

On May 24, Ministers LeBlanc and McKenna (the "Ministers") announced their finding under s. 80(2) of SARA that the Southern Residents face "an imminent threat to both survival and recovery", and released a summary of their assessment. Since the Ministers are of the opinion that the Southern Residents face imminent threats to their survival and recovery, s. 80(2) requires that the Ministers make a recommendation to Cabinet that it make an emergency order for the protection of the Southern Residents – unless equivalent measures have been taken under another Act of Parliament, pursuant to s. 81. To date,

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the Ministers have not made a recommendation to Cabinet or stated that they will rely on equivalent measures, nor have they indicated whether or when they will do either of these things.

By letter dated June 26, 2018, the Petitioners asked the Ministers to clarify their position on whether they will recommend that Cabinet issue an emergency order pursuant to s. 80(2) or SARA, and whether it is the Ministers' opinion that the requirements of s. 81 of SARA are met.

The Ministers responded on July 6, 2018 that they are "currently determining" whether they must recommend that Cabinet issue an emergency order or "whether equivalent measures have been put in place under other federal Acts". They stated that "[t]his question is under active consideration, and [the Ministers] are moving through this process as expeditiously as possible."

The Petitioners remind the Ministers that SARA does not set out a multi-part process for recommending emergency orders. Instead, s. 80 obligates them, if they identify an imminent threat to survival and recovery, to recommend an emergency order if equivalent measures have not been taken under other Acts of Parliament. Following the January 30 Petition, the Ministers took until May 24 to make the imminent threat determination. They have now taken from May 24 until today's date to consider whether there are equivalent measures, and will continue to do so for an unspecified period of time.

It is the Petitioners' position that there are not equivalent measures in place for the purposes of s. 81 of SARA to address the suite of threats to the Southern Residents' survival and recovery, and the Ministers are obligated to urgently recommend an emergency order.

Measures announced to date

On May 24, the Ministers announced certain fisheries measures related to Chinook salmon and Southern Residents. On June 22, 2018 the Ministers and the Minister of Transport announced additional actions with respect to the Southern Residents under the banner of "Canada's Whales Initiative".[1] These consisted of the previously announced fishery removal reduction for Chinook, the previously announced mandatory fishery closures in certain of the Southern Residents' main foraging areas, a mandatory requirement for all marine vessels to stay 200m from killer whales starting July 11, 2018, and increased resources for monitoring and enforcement. The remainder of the measures are voluntary, research-oriented, yet to begin and/or lacking timelines.

In their July 6 letter, the Ministers summarized measures currently being advanced by the government. The Petitioners note that, while the Southern Resident face imminent threats, requiring emergency protections, many of the items identified in the July 6 letter are not yet in place, are not happening urgently, or lack timelines altogether. This includes the work of quieting domestic vessels that transit through Southern Resident critical habitat, as well as the presumably long-term work of advancing work on quieter vessel design at the IMO

It is misleading to characterize many of the measures summarized in the July 6 letter as "addresss[ing] the imminent threats identified for this species" due to the timing and the nature of the measures. For example, research measures of the kind described in the June 22 announcement and July 6 letter, while important, are not equivalent to emergency protections. As another example, while the Petitioners welcome the announcement of the upcoming marine mammal survey, this study is, as described by DFO, a survey of the summer distribution of marine megafauna, emphasizing the abundance of marine mammal populations, with a secondary goal of identifying or refining knowledge of the critical habitat of SARA-

[1] Government of Canada, "The Government of Canada takes immediate action to protect endangered whales through the Oceans Protection Plan" (22 June 2018), online at https://www.canada.ca/en/transport-canada/news/2018/06/the-government-of-canada-takes-immediate-action-to-protect-endangered-whales-through-the-oceans-protection-plan.html [June 22 News Release].

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listed species.[2] The survey is primarily aimed at lesser-known, infrequently sighted species whose numbers are not known, in contrast with the annually counted and individually identifiable Southern Residents.

On June 12, 2018, DFO and Parks Canada provided the Petitioners and others with the critical habitat section of a draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada* (the "Draft Amended Recovery Strategy"). The Draft Amended Recovery Strategy would amend the critical habitat portion of the existing recovery strategy (2008; 2011), including by identifying additional areas. The letter and subsequent e-mail correspondence set out a timeline, in which the final amended recovery strategy would be posted to the registry in late November 2018, assuming no delays. The Ministers will then have 180 days to make an order under s. 58(5) of SARA legally protecting the expanded critical habitat.

The Petitioners submitted comments to DFO and Parks Canada about the Draft Amended Recovery Strategy on July 11, which are appended to this letter. To summarize, the Petitioners welcome the proposed designation of the additional critical habitat areas but have serious concerns about other changes and about the timeline for designation and legal protection.

The Petitioners are concerned about the new approach to the definition of "critical habitat" in the Draft Amended Recovery Strategy. As they explain in the appended comments, it narrows the meaning of critical habitat in a manner inconsistent with SARA, the case law, the existing recovery strategy, and the DFO research papers supporting the expansion of critical habitat. The changes would create uncertainty, impede enforcement, impede management of cumulative effects, and allow critical habitat to become degraded and shrink rather than be protected and restored. In short, the proposed amendments are a backwards step for protection of Southern Resident critical habitat.

The Petitioners are also concerned about the timeline for designation of the additional critical habitat areas. Assuming there are no delays, the amended recovery strategy will be posted until November 2018, and the Ministers could make an order as late as May 2019, leaving the additional areas, which are used year-round by Southern Residents, unprotected until that time. The Petitioners urge the Ministers to recommend that the additional critical habitat areas be immediately designated and protected through an emergency order, pending permanent designation through the ordinary process. Alternatively, they urge the Ministers to issue a critical habitat protection order under s. 58(5) of SARA concurrently with the posting of the amended recovery strategy, rather than wait 180 days.

On July 11, 2018, amendments to the Marine Mammal Regulations were published in the Canada Gazette (the "Amended MMR"). The amendments expand the scope of the regulations to include conservation and protection of marine mammals; identify activities that constitute prohibited disturbance, including approaching any killer whales in B.C. closer than 200 metres; and set out exemptions. The Petitioners have some concerns and questions about the Amended MMR and the Regulatory Impact Analysis Statement (the "RIAS"):

- The June 22 announcement referenced above stated that there would be "a new mandatory requirement for all marine vessels (including recreational boats) to stay at least 200 metres away from killer whales". However, the Amended MMR's prohibitions apply narrowly to commercial and recreational whale-watching. The amended provisions broadly exempt persons "carrying on a[n] […] activity authorized […] under the [Fisheries] Act", and exempting "vessels in transit".

[2] Fisheries and Oceans Canada, "Pacific Regional Survey of Marine Megafauna (PRISMM)" (3 July 2018), online at http://dfo-mpo.gc.ca/science/atsea-enmer/missions/2018/prismm-eng.html

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The Petitioners seek clarification of the meaning of "vessels in transit". The Amended MMR do not include any limitation on these exemptions.

- The RIAS states that DFO will rely on "national guidelines" to accompany the amendments" to address matters such as restrictions on viewing times and numbers of vessels in proximity to whales. The Petitioners note that the link provided does not reveal any national guidelines and seek further information as to whether such guidelines are being developed. Further, the Petitioners question whether guidelines, when they exist, will be adhered to by recreational boaters. Indeed, the RIAS states that "although guidelines developed over the past 20 years through government and industry partnerships exist, they are not always adhered to" even by commercial vessels.
- The Petitioners are concerned that the Amended MMR do not specifically address acoustic disturbance, which, as they have observed in the Petition and subsequent correspondence, is known to adversely impact resident killer whales at distances well beyond the 200-metre distance applied by the new regulations. They note that the so-called statement on acoustic disturbance linked to in the RIAS is in fact a statement on seismic surveys, not vessel noise, and that it is from 2007 and therefore does not reflect current research on this issue.
- Finally, the Petitioners question how much the Amended MMR will really help Southern Residents without increased enforcement. The RIAS states that "[e]nforcement costs of these proposed amendments are not expected to increase." The Petitioners further question how DFO can reconcile this statement in the RIAS with the Ministers' June 22 announcement of increased monitoring and enforcement.

The Petitioners also note that several of the measures that they requested in the petition for an emergency order remain outstanding and are not being advanced by government. These include measures to restrict whale watching in key foraging areas, long-term measures and targets to reduce cumulative noise from shipping traffic, and long-term measures to rebuild weak Chinook salmon conservation units.

Measures identified in the Petition

The following chart indicates the status of each of the measures identified in the Petition, many of which are still outstanding or not being advanced by the government:

Measure	Status
1. Designation of additional areas of critical habitat	DFO and Parks Canada have set a timeline for this process. The timeline described to the Petitioners by email indicates that a revised recovery strategy should be posted to the registry in late November 2018. The law then gives the ministers 180 days to make an order protecting the additional critical habitat, meaning that it might not be legally protected until late May 2019, assuming all deadlines are met. The current draft, provided to the Petitioners on June 12, would identify additional areas but weaken critical habitat protection overall, as

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	described in the appended comments by the Petitioners.
2. Measures to ensure prey availability	
2.1 Establish protected Southern Resident feeding refuges in priority feeding areas to enable Southern Residents to forage without competition, interference, noise or disturbance from recreational and commercial salmon fishing, from May 1-November 30.	Mandatory closures to recreational finfishing and commercial salmon fishing were put in place for June 1-September 30 for most but not all of the areas identified in the Petition.[3] The omission of area 20-1 from the closures is significant omission and undermines the closures' effectiveness, as area 20-1 accounts for approximately 42% of the recreational/sport fishing catch.
2.2 Implement commercial and recreational fishing restrictions to increase the terminal abundance of Chinook in habitats identified as critical to Southern Residents and in other important Southern Resident feeding areas, and of other Chinook populations known to be important in the diets of Southern Residents.	The 25-35% reduction in total fishery removals of Chinook salmon announced on May 24[4] is insufficient to ensure stable prey availability or to ensure the recovery of the Chinook stocks themselves. DFO has not shown that the measures being taken will achieve the claimed reduction in catch. This relates to an overall lack of adequate catch and escapement enumeration to effectively manage fisheries.
2.3 DFO must implement rebuilding plans for weak Chinook conservation units– i.e. ones below their spawner maximum sustainable yield – with the objective of maximizing Chinook recruitment to terminal areas and spawning grounds within two generations	Nothing to date.
3. Measures to avoid noise and physical disturbance	
3.1 Measures to reduce noise and disturbance from recreational and commercial whale watching vessels	
3.1.1 Prohibit commercial and recreational whale watching on Southern Resident killer whales in feeding refuges at relevant times of year	Nothing to date.
3.1.2 Establish a 200m stand-off distance and speed restrictions for commercial and recreational whale-watching vessels in proximity to Southern Residents, outside the key foraging areas	Partial measures in place. Amendments to the Marine Mammals Regulations were published on July 11 and prohibit

[3] Fisheries and Oceans Canada, Fishery Notice (30 May 2018), online at http://www-ops2.pac.dfo-mpo.gc.ca/fns-sap/index-eng.cfm?pg=view_notice&DOC_ID=208486&ID=all.

[4] Government of Canada, "Government of Canada takes action to protect Southern Resident Killer Whales" (24 May 2018), online at https://www.canada.ca/en/fisheries-oceans/news/2018/05/government-of-canada-takes-action-to-protect-southern-resident-killer-whales.html.

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	vehicles from approaching any killer whales in B.C. closer than 200m.[5] There are exceptions for activities authorized under the *Fisheries Act* or SARA and for "vessels in transit." There are no speed restrictions.
a) Ensure that the 200-metre stand-off regulation applies, inter alia, to commercial and recreational whale watching vessels, with the exception of those taking actions necessary to avoid an imminent and serious threat to a person, vessel, or the environment	Partial measures in place. Amendments to the Marine Mammals Regulations were published on July 11 and prohibit vehicles from approaching any killer whales in B.C. closer than 200m.[6] There are exceptions for activities authorized under the *Fisheries Act* or SARA and for "vessels in transit." There are no speed restrictions.
b) Prohibit travelling at excessive speeds by establishing a speed restriction of 6 knots maximum for commercial and recreational whale watching vessels within 1 km of Southern Resident killer whales, with the exception of those taking actions necessary to avoid an imminent and serious threat to a person, vessel, or the environment	Nothing to date.
c) Issue direction for such vessels within 1 km of the whales to maximize the time that they remain stationary, with engines off	Nothing to date.
d) Require such vessels, when consistent with navigational safety, to shut off sonars and other underwater transducers within 1 km of the whales	Nothing to date.
3.1.3 Require evaluation and implementation, as appropriate, of measures to limit vessel-time spent in proximity to Southern Resident killer whales	Nothing to date.
3.1.4 Use Minister of Fisheries and Oceans' power under s. 85 of SARA to designate enforcement officers to patrol Southern Resident critical habitat and other key foraging areas	Measures proposed. The Ministers have announced additional monitoring and enforcement capacity: funding for the Straitwatch program for three years, adding fishery officers, and increasing aerial surveillance.[7] The National Aerial Surveillance Program increase "may include support to amended *Marine Mammal Regulations*" but will not be in place until summer 2019 and it is not clear when the Fisheries Aerial

[5] Canada Gazette, Part II, Volume 152, Number 14, registered June 22, 2018, P.C. 2018-842, June 21, 2018, Regulations Amending the Marine Mammal Regulations, SOR/2018-126, online at http://gazette.gc.ca/rp-pr/p2/2018/2018-07-11/html/sor-dors126-eng.html [Amended Marine Mammal Regulations].
[6] *Ibid.*
[7] June 22 News Release.

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	Surveillance and Enforcement increase will be in place.[8] It is the Petitioners' understanding that, as of the date of writing, there is no increased enforcement presence on the water to enforce new measures (including the fisheries closures and the new amended Marine Mammal Regulations) or existing rules (such as the SARA prohibition on harassment). The RIAS suggests no new enforcement effort is anticipated.
3.1.5 Establish a licensing system for commercial whale-watch operators that view Southern Resident killer whales in Canadian waters	Will not be implemented. The government has advised, in the RIAS, that it will not implement a licensing system for commercial whale-watching.
3.2 Operational measures to reduce noise and disturbance from commercial vessels transiting key Southern Resident foraging areas	
3.2.1 Introduce seasonal speed controls for commercial vessels transiting Haro Strait and waters adjacent to the key Southern Resident foraging areas in Juan de Fuca Strait	The Vancouver Fraser Port Authority's ECHO program announced a voluntary trial slow-down from July 1-September 15, with the possibility of continuing to the end of October if the Southern Residents are present.[9] This is not a government-led initiative.
3.2.2 Direct lateral displacement within existing shipping lanes to reduce acoustic exposure in key foraging areas	The government will ask outbound vessels to transit further away from important foraging areas during the summer and continuing into the fall.[10] This is a trial program and entirely voluntary, and the Petitioners understand it may not be implemented until mid-August 2018 or later.
3.2.3 Quiet commercial vessels servicing local routes in Southern Resident critical habitat (with 4 related sub-measures for noise reduction, measurement, maintenance)	Nothing to date. The federal government announced it will be "[w]orking with BC Ferries to develop a noise management

[8] Government of Canada, "Southern Resident Killer Whale Recovery Technical Briefing and Round-Table", June 22, 10:30-12:30PM, DFO Regional Headquarters: 401 Burrard Street, Vancouver [June 22 Technical Briefing], at slide 23.
[9] June 22 News Release; June 22 Technical Briefing at slide 19.
[10] June 22 News Release; June 22 Technical Briefing at 20.

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	plan." No timeline has been provided for this work.[11] Noise management plans are intended as plans for commercial fleet operators to "identify measures to reduce overall noise over time," including operational, maintenance, and technological measures. The BC Ferries plan would be the first.[12]
3.3 Measures to address the cumulative effect of vessel traffic	
3.3.1 Mandate that no net increase in overall noise levels shall occur relative to 2016 levels	Nothing to date.
3.3.2 Require that DFO, in collaboration with Transport Canada, within 18 months, develop and adopt a set of noise reduction targets that are biologically relevant and meaningful to the recovery of the Southern Residents	Nothing to date.

Request

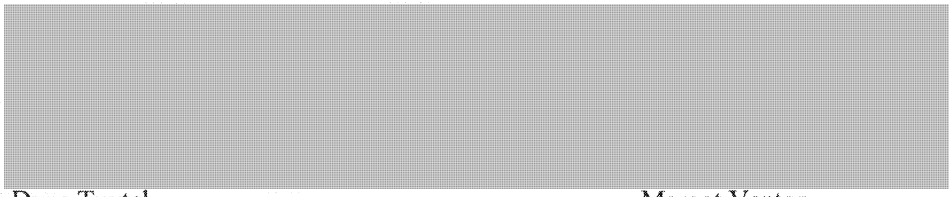
It is the Petitioners' position that, while the recent announcements are important, emergency protections are still needed, and that the measures announced or in place at this time do not constitute "equivalent measures" for the purposes of s. 81 of SARA.

The Petitioners are concerned that the Ministers' ongoing failure to recommend an emergency order is unlawful. They are further concerned that the Ministers have not provided a timeline for their decision. If this situation persists they may be forced to turn to the courts to ensure compliance with SARA.

The Petitioners acknowledge that the government is convening a multi-stakeholder group, with a first meeting on July 30, but this forum and its timing will not lend itself well to urgent progress on emergency measures.

The Petitioners therefore request a meeting with the Deputy Ministers and the Ministers' staff copied on this email who they have previously met with, to discuss the gaps between the measures needed and what has been announced, timelines for measures, and the timeline for a decision as to whether to recommend an emergency order. They suggest a telephone meeting as it will be easier to coordinate.

Sincerely,



Dyna Tuytel
Barrister & Solicitor

Margot Venton
Barrister & Solicitor

[11] June 22 News Release.
[12] June 22 Technical Briefing at slide 21.

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Encl.

c. David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation, World Wildlife Fund – Canada

The Honourable Marc Garneau, Minister of Transport

Marlo Raynolds, Chief of Staff to the Minister of Environment and Climate Change

Shane McCloskey, Senior Policy Advisor, Transport Canada

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s.19(1)

VANCOUVER CALGARY TORONTO OTTAWA HALIFAX

ecojustice

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E-Mail: [redacted]
File No: 524

July 11, 2018

Via E-mail: SARA.XPAC@dfo-mpo.gc.ca

Cheryl Webb
Regional Director
Ecosystems Management Branch
Fisheries and Oceans Canada

Helen Davies
Field Unit Superintendent
Coastal British Columbia Field Unit
Parks Canada Agency

Dear Ms. Webb and Ms. Davies:

Re: External review of the critical habitat section of the draft amended recovery strategy for Resident Killer Whales

We write on behalf of the David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation and World Wildlife Fund Canada (the "Conservation Groups"). We write in response to your June 12, 2018 letter to provide the Conservation Groups' feedback on section 7 of the Species at Risk Act ("SARA") draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada* (the "Draft").

I. The Conservation Groups' previous work on resident killer whale issues

The Conservation Groups have a longstanding interest in, and history of working to protect, the Southern Resident Killer Whales (the "Southern Residents") and their primary prey, Chinook salmon.

The David Suzuki Foundation ("DSF") is a leading Canadian environmental non-profit organization whose combined digital channels engage upwards of one million people weekly. DSF collaborates with all people in Canada, including government and business, to conserve the environment and find solutions that will create a sustainable Canada through evidence-based research, public engagement and policy work. DSF has worked to improve the sustainability of Pacific salmon fisheries in Canada for more than 20 years, participating in planning processes and playing a key role in the design and implementation of Canada's Wild Salmon Policy. DSF has provided input into the recovery strategy and action plan for Southern Residents focused on restoring Chinook salmon abundance and accessibility as a primary food resource necessary for the recovery of these whales, along with recommendations on reducing noise and

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contaminant impacts. DSF has a long standing commitment to protect Southern Residents, including as litigant before Canadian and American courts in cases concerning the legal protection of critical habitat for the Southern Residents.[1]

Georgia Strait Alliance ("GSA") is a registered charity with extensive membership in British Columbia. GSA collaborates with individuals, businesses, and government in pursuit of its mission: to protect and restore the marine environment and promote the sustainability of Georgia Strait, its adjoining waters, and communities. This includes protecting the diversity of wildlife and their habitat. For more nearly 30 years, GSA has been an advocate around protecting the habitat of Southern Residents from the negative impacts of pollution and the loss of their prey species, Chinook salmon. During the last few years, GSA has focused on securing the release of the final action plan (supported by over 800 GSA members who sent in letters), participated in consultations and dialogues around orca protection, took a lead at the recent DFO hosted orca symposium (sat on the advisory committee and let one of the workshop sessions), and has resumed advocacy to have open-net cage salmon farms removed and the industry transitioned to closed containment to protect all wild salmon species. GSA has been a litigant before Canadian and American courts in cases concerning the legal protection of critical habitat for the Southern Residents.[2]

Natural Resources Defense Council ("NRDC") is a not-for-profit membership organization, incorporated under the laws of the State of New York in the United States of America. They combine more than three million members and online supporters with the expertise of hundreds of scientists, lawyers, and policy advocates in the United States and across the globe. The NRDC works to safeguard the earth – its people, its plants and animals, and the natural systems on which all life depends. Their Oceans Program, which includes their work on the Southern Residents, fights to restore marine vitality by working to end overfishing, protect important marine areas, improve oceans governance, and combat emerging threats. For more than two decades, through litigation, national and international advocacy, and science-based policy development, they have helped lead the environmental community in preventing and mitigating the impacts of ocean noise pollution on marine wildlife. With their partners in the Orca Salmon Alliance, they have worked in the United States to improve prey availability for the Southern Resident population.

Raincoast Conservation Foundation ("Raincoast") is a charitable, non-profit organization comprised of scientists and conservationists who are empowered by their research to protect the lands, waters and wildlife of British Columbia. They use rigorous, peer-reviewed science, education, and community engagement to further conservation objectives. Raincoast operates a research lab at the University of Victoria, a field station, and research vessel. They collaborate with academic and government scientists to produce high-quality publications that further scientifically sound conservation decisions. For more than decade, Raincoast has used these tools to defend the critical habitat and lives of the Southern Residents. They have been a litigant before Canadian and American courts in cases concerning the application of

[1] In the Federal Courts of Canada: *David Suzuki Foundation v Canada (Fisheries and Oceans)*, 2010 FC 1233; *Canada (Fisheries and Oceans) v David Suzuki Foundation*, 2012 FCA 40. In the United States District Court: *Inter Tribal Sinkyone Wilderness Council et al* v *National Marine Fisheries Service et al* (Northern District of California, Eureka Division, decided 25 September 2013).

[2] In the Federal Courts of Canada: *David Suzuki Foundation v Canada (Fisheries and Oceans)*, 2010 FC 1233; *Canada (Fisheries and Oceans) v David Suzuki Foundation*, 2012 FCA 40. In the United States District Court *Center for Biological Diversity et al v Robert D Lohn et al* (Western District of Washington at Seattle, decided 17 December 2003); In the United States District Court: *Washington State Farm Bureau et al v National Marine Fisheries Service et al* (Western District of Washington at Seattle, decided 20 December 2006); *Inter Tribal Sinkyone Wilderness Council et al* v *National Marine Fisheries Service et al.* (Northern District of California, Eureka Division, decided 25 September 2013).

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SARA to the Southern Residents, including the legal protection of critical habitat.[3] Raincoast has published a population viability analysis that evaluates and ranks threats to Southern Residents. They participate in federal fisheries planning processes to manage and recover Chinook populations, challenge projects that harm Southern Resident critical habitat, advocate for vessel regulations to reduce noise and disturbance, and advocate for vessel regulations to reduce noise and disturbance.

World Wildlife Fund Canada ("WWF-Canada") is a registered charity and Canada's largest international conservation organization, with the active support of hundreds of thousands of Canadians. WWF-Canada is committed to building a future where nature and people thrive. Over time, their work has evolved from protecting particular wildlife species and habitats to protecting life on Earth – including our own. Today, their work is about life, because everything they do is about securing the future of healthy, thriving ecosystems. And living, because the choices we make will decide that future – for us and for all species. WWF-Canada's work is grounded in science, using the best available data and knowledge to understand ecological connections, identify pressing issues and work with partners in pragmatic ways to develop effective conservation strategies. WWF-Canada has been working since 2011 to quiet the oceans for Southern Residents and other Pacific marine species. By working with government and industry, WWF-Canada has been advancing solutions to the increasing problem of underwater noise, while seeking strong protections and measurable reductions to the threats killer whales face.

II. Comments on the process for amending the Recovery Strategy

In April 2017, DFO identified the southwestern Vancouver Island critical habitat area described on page 59 and in Figures 4 and 5 of the Draft as a "habitat of special importance" to Resident Killer Whales in a CSAS Science Advisory Report.[4] The report stated that this area and a new area of importance to Northern Resident Killer Whales, "together with previously legally identified critical habitat, are necessary for the survival or recovery of [Resident Killer Whales]," and concluded that they "warrant consideration as additional critical habitat."[5]

On January 30, 2018, in their petition to the Minister of Fisheries and Oceans and Minister of Environment and Climate Change (the "Petition"), the Conservation Groups requested that the federal government immediately designate this additional area of critical habitat as part of an emergency order for the Southern Residents under s. 80 of SARA.

On May 24, 2018, the Minister of Fisheries and Oceans and Minister of Environment and Climate Change announced their finding under s. 80(2) of SARA that the Southern Residents face "an imminent threat to both survival and recovery" and released a summary of their imminent threat assessment. This obligates the Ministers to recommend, to Cabinet, that Cabinet make an emergency order to protect the Southern Residents, unless in their opinion equivalent measures have been taken under another Act of Parliament.[6] Critical habitat can be designated through an emergency order. Thus far, the Ministers have

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[3] In the Federal Courts of Canada: *David Suzuki Foundation v Canada (Fisheries and Oceans)*, 2010 FC 1233; *Canada (Fisheries and Oceans) v David Suzuki Foundation*, 2012 FCA 40; *Tsleil-Waututh Nation et al v Canada (Attorney General) et al*, decision pending. In the United States District Court: *Inter Tribal Sinkyone Wilderness Council et al* v *National Marine Fisheries Service et al* (Northern District of California, Eureka Division, decided 25 September 2013).

[4] Fisheries and Oceans Canada, 2017, *Identification of Habitats of Special Importance to Resident Killer Whales (Orcinus orca) off the West Coast of Canada*, DFO Can Sci Advis Sec Sci Advis, Rep 2017/011.

[5] Ibid at pp 3, 10.

[6] SARA ss. 80(2), 81.

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not recommended an emergency order. They have chosen instead to amend the Recovery Strategy through the ordinary, and longer, process established under sections 41, 43 and 45 of SARA.

In your letter of June 12, 2018, you set out a timeline for amending the Recovery Strategy: completion of the external review by July 11, 2018, a 60-day public comment period, and 30 days for the government to incorporate comments before posting the final document on the Species at Risk Public Registry. By email on June 27, 2018, Karen Leslie, Regional Manager for the Species at Risk Program at DFO, clarified for us that the government expects to take approximately a month for revisions and internal approvals between the conclusion of the external review on July 11 and the posting of the proposed amended Recovery Strategy for public comment, such that the government expects to post it on the Registry in late August 2018. Based on the timelines provided to us, with the subsequent 60-day public comment period and 30 days for the government to incorporate comments before posting the final version, the final document will be posted in the Registry in late November 2018.

Furthermore, the additional critical habitat will not be legally protected until the ministers make an order under s. 58(5) of SARA, within 180 days of the revised recovery strategy being posted in the Registry. This means that the additional critical habitat, which Southern Residents use year-round, might not be protected until late May 2019.

As a consequence of the government's choice to use the lengthier critical habitat designation and protection processes under SARA instead of an emergency order, these additional areas of critical habitat will not be designated until late autumn, and protections may not be in place until well into next year – even assuming all deadlines are met.

Under the circumstances, protection of all known areas of critical habitat is an urgent matter. It is therefore crucial that there not be any further delay in designating and legally protecting the additional areas of critical habitat. We urge the Minister of Fisheries and Oceans and Minister of Environment and Climate Change to use their power under s. 80 to recommend that these new critical habitat areas be immediately designated and protected through an emergency order, pending permanent designation of the area through the ordinary processes. Alternatively we urge them to issue a critical habitat protection order for these additional areas concurrently with their designation, rather than wait 180 days.

III. Comments on the contents of the Draft

A. Support for expansion of critical habitat

The Conservation Groups support the addition of the areas of critical habitat identified in the Draft, given their importance to Resident Killer Whales. In particular, the Petitioners note the strong evidence for the importance of the area on the southwest side of Vancouver Island to the prey aspect of critical habitat, as described in the supporting CSAS documents.[7] It is especially important that this key year-round foraging area be afforded legal protection as critical habitat in light of continued poor Chinook returns.

[7] Ford, JKB et al, "Habitats of Special Importance to Resident Killer Whales (*Orcinus orca*) off the West Coast of Canada", Fisheries and Oceans Canada, Canadian Science Advisory Secretariat (CSAS), Research Document 2017/035, online at http://publications.gc.ca/collections/collection_2017/mpo-dfo/Fs70-5-2017-035-eng.pdf [Ford et al 2017]; Fisheries and Oceans Canada, "Identification of Habitats of Special Importance to Resident Killer Whales (*Orcinus orca*) off the West Coast of Canada", Fisheries and Oceans Canada, Canadian Science Advisory Secretariat (CSAS), Science Advisory Report 2017/011, online at http://waves-vagues.dfo-mpo.gc.ca/Library/40600385.pdf [DFO 2017].

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B. The 200m distance

The Draft identifies "Unimpeded physical space surrounding individual whales (minimum vessel approach distance 200m)" as an attribute of critical habitat, and lists "Vessels approach to whales (within 200m)" as a corresponding example of an activity likely to result in the destruction of critical habitat, under the category pf physical disturbance. While a 200 metre distance can reduce physical disturbance, it is well-established in the literature that small vessels *at least as far as 400 metres* can mask the echolocation signals essential to resident killer whale foraging, and can cause behavioural changes that result in diminished foraging activity – and larger vessels cause similar effects at greater distances.[8] The Draft's language does not comport with the best available science.

The Conservation Groups therefore recommend modification of the attribute to "Unimpeded physical space surrounding individual whales (minimum vessel approach distance at least 400m)", and, most importantly, the addition of a separate attribute concerning acoustic disturbance in general: "Acoustic habitat quality sufficient for unimpeded foraging and other life functions."

C. Prey availability

The current Recovery Strategy states, in the context of prey availability, that "[p]rey must be physically accessible to resident killer whales in critical habitat, yet killer whales and fishing vessels targeting the same prey compete with each other for space, particularly in fishing hotspots." The Draft appears to lack an equivalent acknowledgement that the prey availability aspect of critical habitat requires not only abundance of but also unimpeded access to prey. The Conservation Groups suggest that this or a similar statement be included, and expanded to acknowledge that, in addition to fishing vessels, other vessel types, such as commercial or recreational whale watching boats, can cause physical disturbance that affects prey availability.

D. The "bounding box approach"

The Draft contains the following statement at page 58:

> Critical habitat has been identified using the bounding box approach. This means that critical habitat is not composed of the entire area within the identified boundaries but only those areas within the identified geographical boundaries where the described biophysical features, attributes, and the functions they support occur [...]

This is a change from the existing recovery strategy, which would narrow the meaning of critical habitat. It is inconsistent with the meaning of "critical habitat" as that term is defined in SARA and interpreted by the Federal Courts, and it also appears to be inconsistent with the description of the "bounding box approach" in the supporting scientific documents.

Critical habitat as defined in SARA

[8] *E.g.*, USA, NMFS, Holt MM, "Sound exposure and southern resident killer whales (*Orcinus orca*): A review of current knowledge and data gaps" (2008) NOAA Tech Memo, NMFS-NWFSC-89; Lusseau, D et al, "Vessel traffic disrupts the foraging behavior of southern resident killer whales *Orcinus orca*" (2009) 6 *Endangered Species Research* 211; Noren, DP et al, "Close approaches by vessels elicit surface active behaviors by southern resident killer whales" (2009) 8 *Endangered Species Research* 179. *See also* Williams, R et al, "Effects of vessels on behavior patterns of individual southern resident killer whales *Orcinus orca*" (2009) 6 Endangered Species Research 199.

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SARA defines "critical habitat" as "the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species."[9]

SARA defines "habitat" for aquatic species as:

> spawning grounds and nursery, rearing, food supply, migration and any other areas on which aquatic species depend directly or indirectly in order to carry out their life processes, or areas where aquatic species formerly occurred and have the potential to be reintroduced.[10]

Critical habitat as defined by the Courts

The Federal Court has emphasized that s. 41(1)(c) of SARA "requires that the Minister identify in a recovery strategy document as much critical habitat as it is possible to identify at that time, even if all of it cannot be identified, and to do so based on the best information then available."[11]

The Federal Court has also confirmed, in a case concerning the critical habitat of Resident Killer Whales, that the identification of critical habitat under SARA requires an identification of both the specific geographic location and a description of the attributes within that area that area necessary to the survival or recovery of the species.[12]

Critical habitat as defined in the existing recovery strategy

The Draft's statement, which would narrow critical habitat to locations within the critical habitat area, is also a departure from the identification of critical habitat in the existing recovery strategy and in the understanding of critical habitat reflected in the research behind the proposed amendments. The existing recovery strategy identifies critical habitat in the manner required by SARA and the case law. It also states as one of its objectives: "Protect critical habitat for Resident Killer Whales and identify additional areas for critical habitat designation and protection".[13]

Critical habitat as described in the supporting research documents

The DFO research the amendments are responding to identifies "new areas for consideration as critical habitat" and proposes that the "areas" detailed in the report "are habitats of special importance that potentially meet the requirement for designation as critical habitat under the SARA".[14] It both "describe[s] the biophysical functions, features and attributes of these potential critical habitat areas" and "delineate[s] them geographically."[15] It characterizes the proposed change as a "proposed critical habitat extension".[16] Similarly, the summary version describes the "'[b]ounding boxes' [...] that encompass these areas of special importance", and concludes that "[t]he habitat areas identified [...] warrant consideration

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[9] SARA s 2(1).
[10] SARA s 2(1).
[11] *Alberta Wilderness Association et al v Minister of the Environment*, 2009 FC 710 at para 25.
[12] *David Suzuki Foundation et al v Minister of Fisheries and Oceans*, 2010 FC 1233. Upheld by the Federal Court of Appeal: *Canada (Fisheries and Oceans) v David Suzuki Foundation*, 2012 FCA 40.
[13] Fisheries and Oceans Canada, "Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada", *Species at Risk Act* Recovery Strategy Series, Fisheries and Oceans Canada, Ottawa (2011) at page vi.
[14] Ford et al 2017 at pages 14, 21.
[15] *Ibid* at page 21.
[16] *Ibid* at page 23.

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as additional critical habitat", recognizing that it is not only their attributes but also the areas that should be designated under SARA. [17]

These research documents state that the "bounding box approach" identifies an area as a bounding box within which the critical habitat features are found.[18] In other words, it is properly understood as the boundary of the critical habitat area.

Implications of the Draft's approach to identification of critical habitat

The Draft proposes to recognize, and therefore protect, only the occurrences of attributes within areas, as opposed to areas and the attributes present within them. This is a step backwards from the current recovery strategy which would impede protection of critical habitat. Effective protection of critical habitat requires critical habitat to be identifiable so that users of the area can follow, and DFO can enforce, the protective provisions of SARA concerning critical habitat.

SARA provides many legislative tools to support conservation of a species' critical habitat. For these tools to work, it must be possible for both the government and users of critical habitat areas to know whether any given geographic location is within critical habitat. This includes the prohibition of the destruction of critical habitat (s. 58(1)), the requirement for the Ministers to make an order legally protecting critical habitat within 180 days of the recovery strategy being included in the public registry (s. 58(5)), the Governor in Council's ability to make regulations to protect critical habitat on federal lands (s. 59), the requirement to obtain permits for activities affecting critical habitat and activities that may result in destruction of critical habitat (ss. 73, 74, 77), and the requirement to ensure measures to avoid adverse effects of federally reviewable projects on critical habitat (s. 79).

Under the Draft's approach to critical habitat, critical habitat becomes an uncertain patchwork. Users of the area will not know, and DFO will have to constantly re-assess, whether the attributes are present at a given time in a given location. This makes the legal protection of critical habitat challenging for users to abide by and difficult or impossible for DFO to enforce. It also undermines the connectivity of critical habitat, and makes it difficult or impossible to manage cumulative effects on critical habitat as a whole.

The approach described on page 58 of the Draft could have the perverse result that an area is no longer critical habitat, and therefore loses legal protection, if its relevant attributes are being interfered with or destroyed. As described it the Draft, it appears that if degradation occurs that causes a location to lose its attributes temporarily or permanently, it is not critical habitat any longer, and not legally protected. As an example of the potentially absurd effect of this approach, if vessels are approaching Resident Killer Whales closer than 200m, the critical habitat attribute of 200m of unimpeded physical space is absent, with the result that the area is not critical habitat, and is not legally protected. This concept of critical habitat could have the effect of incrementally decreasing critical habitat as it becomes degraded, rather than protecting the area so that its functions and attributes are preserved, or if they are degraded, are restored.

The Petitioners recommend maintaining the existing approach to critical habitat identification

In short, legal protection of critical habitat under SARA and the enforcement of that protection require a clearly identifiable area, within which critical habitat's attributes cannot be destroyed. Critical habitat should be identified in the recovery strategy, and the subsequent order under s. 58(5), as including the existing and expanded critical habitat area, so that the attributes of critical habitat can be effectively

[17] DFO 2017 at pages 2, 10.
[18] Ford et al 2017 at page 21.

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protected, preserved, and restored within that area. The amendment of the recovery strategy, which the Petitioners understood was intended to incorporate new areas of critical habitat based on updated research, should not simultaneously risk undermining the protection of critical habitat.

Sincerely,

[redacted]

Dyna Tuytel
Barrister & Solicitor

Margot Venton
Barrister & Solicitor

c. Jeffery Young and Scott Wallace, David Suzuki Foundation
Christianne Wilhelmson and Rachael Merrett, Georgia Strait Alliance
Michael Jasny, Natural Resources Defense Council
Misty MacDuffee, Paul Paquet and Ross Dixon, Raincoast Conservation Foundation
Hussein Alidina, World Wildlife Fund – Canada
The Honourable Dominic LeBlanc, Minister of Fisheries and Oceans
The Honourable Catherine McKenna, Minister of Environment and Climate Change and Minister Responsible for Parks Canada

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Dozie, Juachi

From: Brekke, Heather
Sent: August-23-18 4:32 PM
To: Fershau, Jonathan; Jones, Lisa Ann
Cc: Kenyon, Robyn
Subject: RE: PLEASE REGISTER AND FOR ACTION: Emergency protections for Southern Resident Killer Whales

Hi Jonathan,

Yes we received these letters. They are not specific to the response on July 11 (though the July 11 letter was attached to the July 16 letter), which may be why they are not referencing this. NHQ coordinated the response.

Heather

-----Original Message-----
From: Fershau, Jonathan
Sent: August-23-18 4:28 PM
To: Brekke, Heather; Jones, Lisa Ann
Cc: Kenyon, Robyn
Subject: RE: PLEASE REGISTER AND FOR ACTION: Emergency protections for Southern Resident Killer Whales

Thanks Heather,

I don't recall seeing the July 16 Ecojustice letter, nor the July 24 DM-level email before today. Hopefully, your team knew about this correspondence :)

I note the "new" Ecojustice Letter of August 20, does not appear to reference our response of Friday, August 17 (3:40 pm), nor the letter they sent to Cheryl/Helen on July 11.

jf

-----Original Message-----
From: Brekke, Heather
Sent: August-23-18 3:12 PM
To: Jones, Lisa Ann
Cc: Fershau, Jonathan; Kenyon, Robyn
Subject: FW: PLEASE REGISTER AND FOR ACTION: Emergency protections for Southern Resident Killer Whales
Importance: High

Fyi.

Jonathan and Robyn, CCing you here as FYI as actors for Karen. No action required.

-----Original Message-----

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From: Webb, Cheryl
Sent: August-23-18 3:08 PM
To: Thomson, Andrew; Leslie, Karen; Davis, Neil; Brekke, Heather; Harber, Lee
Subject: FW: PLEASE REGISTER AND FOR ACTION: Emergency protections for Southern Resident Killer Whales
Importance: High

FYI, another letter from EcoJustice

From: Paravan, Dora
Sent: Tuesday, August 21, 2018 9:48 AM
To: Rascanin, Natasha <natasha.rascanin@tc.gc.ca<mailto:natasha.rascanin@tc.gc.ca>>; Dick, Robert <Robert.Dick@tc.gc.ca<mailto:Robert.Dick@tc.gc.ca>>; Corbin, Claude <claude.corbin@tc.gc.ca<mailto:claude.corbin@tc.gc.ca>>; Sookhdeo, Zahira <zahira.sookhdeo@tc.gc.ca<mailto:zahira.sookhdeo@tc.gc.ca>>; Hanson, Lawrence <lawrence.hanson@tc.gc.ca<mailto:lawrence.hanson@tc.gc.ca>>; Nichols, Megan <Megan.Nichols@tc.gc.ca<mailto:Megan.Nichols@tc.gc.ca>>
Cc: TC.F NCR AO ADMO / AO BSMA RCN F.TC <TC.NCRAOADMO-AOBSMARCN.TC@tc.gc.ca<mailto:TC.NCRAOADMO-AOBSMARCN.TC@tc.gc.ca>>; DL OTT AC ADMO / AC BSMA LD OTT (TC/TC) <TC.dlottacadmo-acbsmaldott.TC@tc.gc.ca<mailto:TC.dlottacadmo-acbsmaldott.TC@tc.gc.ca>>; TC.F NCR XM Deputy Minister's Office / Bureau du sous-ministre XM RCN F.TC <TC.NCRXMDeputyMinistersOffice-Bureaudusous-ministreXMRCN.TC@tc.gc.ca<mailto:TC.NCRXMDeputyMinistersOffice-Bureaudusous-ministreXMRCN.TC@tc.gc.ca>>
Subject: FW: PLEASE REGISTER AND FOR ACTION: Emergency protections for Southern Resident Killer Whales

Good morning,

For your awareness, this correspondence is being registered and will require a response.

Thank you!

Dora Paravan
Executive Assistant to the Deputy Minister | Adjointe exécutive au Sous-ministre Transport Canada | Transports Canada
Place de Ville, Tower C | Place de Ville, Tour C
330 Sparks Street, 29th Floor | 330, rue Sparks, 29e étage Ottawa, Ontario, Canada K1A 0N5
dora.paravan@tc.gc.ca<mailto:lise.dagenais@tc.gc.ca>
Telephone | Téléphone 613-990-4507 / Facsimile | Télécopieur 613-991-0851 Government of Canada | Gouvernement du Canada

From: Paravan, Dora
Sent: Monday, August 20, 2018 2:35 PM
To: XM Documents / Documents XM (TC/TC) <tc.xmdocuments-documentsxm.tc@tc.gc.ca<mailto:tc.xmdocuments-documentsxm.tc@tc.gc.ca>>
Cc: TC.F NCR XM Deputy Minister's Office / Bureau du sous-ministre XM RCN F.TC <TC.NCRXMDeputyMinistersOffice-Bureaudusous-ministreXMRCN.TC@tc.gc.ca<mailto:TC.NCRXMDeputyMinistersOffice-Bureaudusous-ministreXMRCN.TC@tc.gc.ca>>
Subject: PLEASE REGISTER AND FOR ACTION: Emergency protections for Southern Resident Killer Whales

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Dora Paravan
Executive Assistant to the Deputy Minister | Adjointe exécutive au Sous-ministre Transport Canada | Transports Canada
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From: Dyna Tuytel [mailt
Sent: Monday, August 20, 2018 1:31 PM
To: Blewett, Catherine <Catherine.Blewett@dfo-mpo.gc.ca<mailto:Catherine.Blewett@dfo-mpo.gc.ca>>; Margot Venton >; min@dfo-mpo.gc.ca<mailto:min@dfo-mpo.gc.ca>; 'ec.ministre-minister.ec@canada.ca' <ec.ministre-minister.ec@canada.ca<mailto:ec.ministre-minister.ec@canada.ca>>
Cc: stephen.lucas@canada.ca<mailto:stephen.lucas@canada.ca>; Keenan, Michael <michael.keenan@tc.gc.ca<mailto:michael.keenan@tc.gc.ca>>; Olivia French >; Betty Gabel species@georgiastrait.org<mailto:species@georgiastrait.org>; Jeffery Young ; Scott Wallace ; Jasny, Michael Hussein Alidina >; Paul C. Paquet ; Misty MacDuffee Ross Dixon Minister of Transport / Ministre des Transports (TC) <TC.MinisterofTransport-MinistredesTransports.TC@tc.gc.ca<mailto:TC.MinisterofTransport-MinistredesTransports.TC@tc.gc.ca>>; marlo.raynolds@canada.ca<mailto:marlo.raynolds@canada.ca>; McCloskey, Shane <shane.mccloskey@tc.gc.ca<mailto:shane.mccloskey@tc.gc.ca>>; mark.knudsen@dfo-mpo.gc.ca<mailto:mark.knudsen@dfo-mpo.gc.ca>
Subject: RE: Emergency protections for Southern Resident Killer Whales

Dear Ministers Wilkinson and McKenna and Deputy Ministers Blewett, Lucas and Keenan,

Please find attached a letter on behalf of the David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation and WWF-Canada in response to the Deputy Ministers' July 24 email and the July 30 Imminent Threat Assessment for Southern Resident Killer Whales. For convenience I have also attached our previous letter of July 16, which we refer to in today's letter.

Sincerely,

Dyna Tuytel and Margot Venton

Dyna Tuytel
Barrister & Solicitor | Ecojustice<http://www.ecojustice.ca/>
800-744 4th Avenue SW, Calgary, AB T2P 3T4
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From: Wallace, Dorothy [mailto:Dorothy.Wallace@dfo-mpo.gc.ca] On Behalf Of Blewett, Catherine
Sent: Tuesday, July 24, 2018 3:10 PM
To: Dyna Tuytel < Margot Venton
Cc: stephen.lucas@canada.ca<mailto:stephen.lucas@canada.ca>;
michael.keenan@tc.gc.ca<mailto:michael.keenan@tc.gc.ca>
Subject: RE: Emergency protections for Southern Resident Killer Whales

Dear Ms. Tuytel and Ms. Venton:

We appreciate your continued interest in the important issue of Southern Resident Killer Whale (SRKW) conservation. In response to your recent letter, dated July 16, 2018 we also understand that you are anxious for confirmation that the Ministers will be making a recommendation to Cabinet for an emergency order.

The Ministers are respecting their obligations under the Species at Risk Act. Having formed the opinion that the SRKW face an imminent threat to both their survival and recovery, as required under s. 80(2), the Ministers are considering whether equivalent measures have been taken under another Act of Parliament, pursuant to s. 81.

As you are aware, many measures have already been implemented to address key threats associated with prey availability and acoustic and physical disturbance, and we are in the process of identifying and protecting additional areas of critical habitat. As stated in the July 6, 2018 letter to Ecojustice, the Ministers are currently determining whether or not existing measures are providing adequate protection to allow for survival and recovery of the Southern Residents and are moving through this process in a timely manner.

On July 30, 2018 we will hold the inaugural meeting of the new Indigenous and Multi-stakeholder group on Southern Resident Killer Whales, which includes all five of your clients. This forum will be an important ongoing opportunity for future discussions on protection of the Southern Residents.

The Government of Canada is fully committed to managing the threats impacting these whales and to their survival and recovery.

Yours sincerely,

Stephen Lucas
Deputy Minister of Environment and Climate Change

Catherine Blewett
Deputy Minister of Fisheries and Oceans Canada

Michael Keenan
Deputy Minister of Transport Canada

On behalf of,

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The Honourable Jonathan Wilkinson, P.C., M.P.

Minister of Fisheries, Oceans and the Canadian Coast Guard

The Honourable Marc Garneau, P.C., M.P.

Minister of Transport

The Honourable Catherine McKenna, P.C., M.P.

Minister of Environment and Climate Change

From: Dyna Tuytel [mailto:c
Sent: July-16-18 6:46 PM
To: Minister / Ministre (DFO/MPO); 'ec.ministre-minister.ec@canada.ca'; Blewett, Catherine; stephen.lucas@canada.ca<mailto:stephen.lucas@canada.ca>; michael.keenan@tc.gc.ca<mailto:michael.keenan@tc.gc.ca>
Cc: Margot Venton; Olivia French; Betty Gabel; Jeffery Young; Scott Wallace; Christianne Wilhelmson; Rachael Merrett; Jasny, Michael; Misty MacDuffee; Paul C. Paquet; Ross Dixon; Hussein Alidina; tc.ministeroftransport-ministredestransports.tc@tc.gc.ca<mailto:tc.ministeroftransport-ministredestransports.tc@tc.gc.ca>; marlo.raynolds@canada.ca<mailto:marlo.raynolds@canada.ca>; shane.mccloskey@tc.gc.ca<mailto:shane.mccloskey@tc.gc.ca>
Subject: Emergency protections for Southern Resident Killer Whales

Dear Ministers LeBlanc and McKenna and Deputy Ministers Blewett, Lucas and Keenan,

Please find attached a letter on behalf of the David Suzuki Foundation, Georgia Strait Alliance, Natural Resources Defense Council, Raincoast Conservation Foundation and WWF-Canada in response to the Ministers' letter of July 6 and recent announcements concerning Southern Resident Killer Whales.

Sincerely,

Dyna Tuytel and Margot Venton

Dyna Tuytel
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Khanna, Sukriti

From: Greene, Annely
Sent: August-23-18 3:29 PM
To: Cottrell, Paul
Subject: Amended Authorization Final for J50 NOAA_SECTION_38_AUTHORIZATION_AUG 23 2018 DRAFT.doc
Attachments: Amended Authorization Final for J50 NOAA_SECTION_38_AUTHORIZATION_AUG 23 2018 DRAFT.doc

Here you go. This includes bullets 7 and 8 from the methodology doc that Terri provided.

Pages 3426 to / à 3430

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

s.19(1)

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Khanna, Sukriti

From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: August-23-18 2:03 PM
To: Cottrell, Paul
Subject: RE: Fecal from J16s (2018Aug12-01)

Kim does a lot of great work, was going to touch base wrt her email from yesterday and interest in working with you and the ahc wrt Haida Gwaii, perhaps we could touch base tomorrow, would you prefer 7:00 or 8:00 am? I wasn't certain if you might be at home Fridays or still going into the office ☺
S

From: Cottrell, Paul [mailto:Paul.Cottrell@dfo-mpo.gc.ca]
Sent: Thursday, August 23, 2018 1:57 PM
To: Raverty, Stephen AGRI:EX
Subject: Re: Fecal from J16s (2018Aug12-01)

Thanks Stephen,
Amazing work!

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Raverty, Stephen AGRI:EX
Sent: Thursday, August 23, 2018 1:53 PM
To: Cottrell, Paul
Subject: FW: Fecal from J16s (2018Aug12-01)

From: Kim M Parsons [mailto:
Sent: Thursday, August 23, 2018 1:48 PM
To: Linda Rhodes (NOAA Federal)
Cc: Raverty, Stephen AGRI:EX; Brad Hanson; Wood, Chelsey AGRI:EX; Kathi Lefebvre; Gabe Wisswaesser; Hendrik.Nollens@seaworld.com; candice.emmons@noaa.gov; Dawn Noren - NOAA Federal; Mike Ford - NOAA Federal; Kristin Wilkinson - NOAA Affiliate
Subject: Fecal from J16s (2018Aug12-01)

An update on the fecal sample collected on 12 August 2018 from the J16's during J50 focal follows & health assessment.

I just completed the nuclear genotyping and was able to compare the genotype of the sample to our existing SNP database. The DNA from the fecal sample was in great condition and high quality genotypes were obtained (the sample was genotyped in quadruplicate). Our SRKW genetic database includes genotypes for both J50 and J16 generated from skin biopsies. Based on genetic identity at 62/66 loci I can confirm that **sample 2018AUG12-01 was a fecal sample collected from J16**.

I hope this is of help in directing the intended fecal analyses. Please feel free to reach out if I can answer any questions regarding genetic identification of the sample.

All the best,

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Kim.

On Aug 13, 2018, at 10:47 AM, Kim M Parsons <[redacted] wrote:

Hi All -

Samples have been received & sub-sampled for microbiome, whale genotyping & prey analysis. Sample has been assigned the following ID, conforming to our typical fecal sample naming protocol: 2018Aug12-01.

Hendrick - the 5ml sample is on its way to you on blue ice via UPS. Tracking #1z w80 99E 1000 337 6.

Brad/Candi - the remainder of the sample is in the fridge awaiting instructions for subsampling for parasitology (UW) before we store it -80 for other analyses.

Best,

Kim.

On 8/13/2018 8:54 AM, Raverty, Stephen AGRI:EX wrote:

Hi Kim
At present, there is no material coming to Canada, the 15 ml sample is designated for investigators in Seattle and once the feces have been sent out, any residual can be stored at -80. A revised draft for fecal (and breath) sample disposition is attached and essentially, there is sufficient volume of feces to cover all requests.

Whale genetics and id, Kim
Prey analysis, Kim
HABs, Kathy Lefebvre (2-3 ml of feces fresh or frozen, depending on when the samples are submitted)
Microbiome, Linda
Parasitology, Chelsea Wood, U of Washington (2 ml, fresh and not frozen)
Endocrine, Sam (feces on sterile gauze)

I am not certain what volumes or how the samples should be stored until analysis, but if the samples can be forwarded today, this should ensure the material is still relatively fresh. Kathi and Chelsea have been copied in case there are specific instructions regarding handing the fecal sample.

Please note that the 5 ml sample to be shipped to Hendrik will be subsampled at SeaWorld with appropriate samples (Teflon swabs, culture plates, or fresh feces) forwarded to UC Davis and Georgia. We are arranging it this way to facilitate and expedite this shipment for diagnostic

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studies. Future efforts may be refined.

Thank you
Stephen

-----Original Message-----
From: Kim M Parsons [mailto:[redacted]
Sent: Monday, August 13, 2018 8:34 AM
To: Raverty, Stephen AGRI:EX; 'Kristin Wilkinson - NOAA Federal'; Brad Hanson - NOAA Federal
Cc: Linda Rhodes (NOAA Federal); Gabe Wisswaesser; Melanie Paquin; [redacted]
Subject: Re: big fecal from the J16s today

Thank you for the details, Stephen. As soon as the samples make their way to NWFSC, I will take my subsample & can ship the 5ml sample on to Hendrik on blue ice this afternoon.

Are we sending any of it your way? What are the plans for the 15ml tube in terms of storage method & analyses? Just wondering if it needs to be kept refrigerated or if we want to freeze it at some point.

Best,

Kim.

On 8/13/2018 8:24 AM, Raverty, Stephen AGRI:EX wrote:

If possible, could you please arrange to have the 5 ml fecal sample shipped today on ice, by overnight courier to Dr Hendrik Nollens at SeaWorld. The shipping address and Hendrik's phone number are below.
Thank you

Hendrik Nollens, DVM
SeaWorld San Diego
Veterinary Services
500 SeaWorld Dr
San Diego CA 92109
(619) 606-6178

-----Original Message-----
From: Kristin Wilkinson - NOAA Federal [redacted]
Sent: Monday, August 13, 2018 7:00 AM
To: Brad Hanson - NOAA Federal
Cc: Linda Rhodes (NOAA Federal); Gabe Wisswaesser; Raverty, Stephen AGRI:EX; Kim

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Parsons; Melanie Paquin; [redacted]
Subject: Re: big fecal from the J16s today

Melanie,

I can be reached at x4747 or on my cell at 206-550-6208. Text might be best, I've got a morning full of meetings but two interns in standby to run it over.

Gabe, what is your number and do you have any time restrictions today for the sample to be dropped off?

The goal will be to get it over there as soon as I have it this morning.

Thanks,
Kristin

[redacted]

On Aug 13, 2018, at 6:42 AM, Brad Hanson - NOAA Federal <[redacted] wrote:

Hi all

Kristen - please coordinate with Melanie to pickup sample this morning and Gabe to receive sample - Melanie is in Bldg 4 at Sandpoint

Gabe - there are 2 tubes of feces and a bunch on gauze . One with about 5ml and other with about 15ml. Stephen will send instructions for sub sampling and distribution and shipping instructions for the 15ml
The tube with 5ml is intended for Hendrik- he will send shipping instructions
Kim can use some of the sample on gauze for genotyping
Don't freeze remaining sample until all sub sampling has been completed
Thanks
Brad

[redacted]

On Aug 13, 2018, at 06:00, Linda Rhodes (NOAA Federal) [redacted] wrote:

Hi all,

I'm not in the office today, but Gabe (working with me on the SRKW project) will be in the lab today & he can coordinate with Melanie.
His office/lab # is [redacted] (He's also cc'd here.)

Thanks Brad & Melanie!
Linda

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s.19(1)

On Aug 12, 2018, at 7:55 PM, Brad Hanson (NOAA Federal) [redacted] wrote:

we got about a 20 ml fecal from the J16s - its either from 16, 42, or 50

i put the whole sample on ice and Melanie is bringing it back to Seattle tonight rather than ship to Boeing field

email her in the AM and she will coordinate with one of you to have someone pick it up either at Sandpoint or our house in Lake Forest Park - either is probably faster than Boeing Field

thanks

Brad

--
==========ver
_____

M. Bradley Hanson, Ph.D.
NOAA/NMFS/Northwest Fisheries Science Center
2725 Montlake Blvd. E
Seattle, WA 98112

Office phone: 206-860-3220
Fax: 206-860-3400
Cell Phone [redacted]

--
Kim M. Parsons, Ph.D.

Research Biologist

Marine Mammal Laboratory
NOAA, Alaska Fisheries Science Center
7600 Sand Point Way NE
Seattle, WA 98115

AND

Conservation Genetics
NOAA, Northwest Fisheries Science Center
2725 Montlake Blvd E
Seattle, WA 98112

cell phone [redacted]
lab phone [redacted]

http://www.afsc.noaa.gov/nmml/personnel/nmmlprofile.php?name=Kim.Parsons
https://scholar.google.com/citations?hl=en&user=8unbZEYAAAAJ&view_op=list_works&sortby=pubdate

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"There is no science without fancy, and no art without facts."
S.J. Gould

--
Kim M. Parsons, Ph.D.

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cell phone
lab phone

http://www.afsc.noaa.gov/nmml/personnel/nmmlprofile.php?name=Kim.Parsons
https://scholar.google.com/citations?hl=en&user=8unbZEYAAAAJ&view_op=list_works&sortby=pubdate

[NGOS - Government Contractor for Marine Mammal Laboratory, AFSC NOAA]

"There is no science without fancy, and no art without facts."
S.J. Gould

s.21(1)(a)
s.21(1)(b)

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-23-18 8:44 AM
To: Cottrell, Paul
Subject: RE: Update SRKW

Great thanks Paul!

On another note, do you have time for a quick chat today? I wanted to ask a couple questions to move along funding to support third parties in Pacific. Are you free after the Killer whale operations committee meeting today? 10:30 am PDT?

Let me know,

Kendra

From: Cottrell, Paul
Sent: Thursday, August 23, 2018 11:28 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>; Kennedy, Eddy <Eddy.Kennedy@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>; Sloan, Lara <Lara.Sloan@dfo-mpo.gc.ca>; Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Cc: Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Greene, Annely <Annely.Greene@dfo-mpo.gc.ca>
Subject: Update SRKW

Hi All,
K and L pod members were located off-shore on the West Coast of Vancouver Island yesterday in the smoke and fog and followed from 14:00-18:00. Visability was 150 m. J-pod was not located yesterday but believed to still be in off-shore waters. No sightings of SRKW in in-shore waters yesterday.
Cheers,
Paul

From: Cottrell, Paul
Sent: August-22-18 8:48 AM
To: Jenkins, Randy; Davis, Neil; Harber, Lee
Cc: Moore, Kendra; Scott, Paul G
Subject: Re: SRKW J-50

Thanks Randy,
As an update, just received information from DFO contractor working off the West Coast of Vancouver Island (ie through DFO science) that J50 was seen with mom last night at 6:45 PM off Carmanah Point traveling toward Nitinat. It was a super pod so, J, K and L pods were all present. J16 mom was observed foraging and close with J50.
When are we hiring for the hubs and getting new staff in place as it is much needed asap. I hope this is a priority action. The summer is going fast...
As I mentioned, updates from all the potential sources of information (eg whale watch industry, NOAA, DFO CP, DFO RM, DFO science, NGO's, Straitwatch, researchers, commercial vessels, cetacean sightings network, etc) are not always real time and sometimes the information is received next day. It is a big ocean out here and with the fog/smoke it has made locating whales when offshore very difficult. The trans-boundary nature of the movements

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further complicates things. Often only a small portion of a SRKW pod are seen (ie not all members of a pod are observed). This includes J50 and J35. Hope this is useful context.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Jenkins, Randy
Sent: Wednesday, August 22, 2018 6:44 AM
To: Cottrell, Paul; Davis, Neil; Harber, Lee
Cc: Moore, Kendra; Scott, Paul G
Subject: RE: SRKW J-50

Yes it would be useful for us if the daily info we receive included any and all updates/information/plans from RM, C&P, science, NOAA and anyone else connected to SRKW so that a complete summary can be presented on what the latest information… consolidation and compilation of relevant whale information is something we would envision as a role for the "HUBS" in the future (on both coasts)… for the short term would it be helpful if Kendra developed a short checklist/template where we could capture updates from the various players?

Thanks.
Randy

From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 6:35 PM
To: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: Re: SRKW J-50

Very good point, probably best to have one point source from region to you guys to prevent confusion.

Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Jenkins, Randy
Sent: Tuesday, August 21, 2018 3:26 PM
To: Cottrell, Paul; Davis, Neil
Subject: Re: SRKW J-50

Thanks again,,, I have advised up with your context and that it may be premature to read into lack of J50 sighting.

Very important that we try and have consistent messaging coming into the center. Be useful if Science would advise or collaborate on messaging they are sending to HQ esp if potentially forecasting or suggesting the demise of an animal of interest.

Thanks for your rapid responses.

Randy

Sent from my BlackBerry 10 smartphone on the Rogers network.

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From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 18:14
To: Davis, Neil
Cc: Jenkins, Randy
Subject: Re: SRKW J-50

The animals are in an isolated area on the West Coast of Vancouver Island near Swiftsure Bank. Hopefully this gives you some context.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 3:11 PM
To: Davis, Neil
Cc: Jenkins, Randy
Subject: Re: SRKW J-50

Hi Neil,
The conditions are very poor for veiwing on the water. Just clarified things with Sheila and NOAA. J-pod was seen on Saturday heading west. J-50 was seen at that time by NOAA. Brian Gisborne was on water on Sunday in poor conditions and saw K and L pod and some J's and did not see J50. Due to the conditions it was almost certainly an incomplete count. J50 is known for straying away from the group so not unusual. No sightings yesterday and today as the viewing conditions are very poor. That is the latest I have. There is only a couple 100 meters of visability due to the smoke/fog. Hope this is useful.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Davis, Neil
Sent: Tuesday, August 21, 2018 2:46 PM
To: Cottrell, Paul
Subject: Fw: SRKW J-50

Can you assist?

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Sent: Tuesday, August 21, 2018 2:16 PM
To: Davis, Neil; Harber, Lee
Cc: Scott, Paul G; Moore, Kendra
Subject: SRKW J-50

Can someone please confirm the information below (*J50 not sighted past couple days but her mother and others sighted multiple times*)... the last update I had was that J pod was sighted on August 19th. Is it the case that J50 is no longer with the Pod??

I had only earlier this afternoon advised that there wasn't anything new to report today on SRKW and then Science sends this message below to the acting ADM FHM who is now asking for details and whether he should send the DM a heads up on this. Any info would be appreciated.

Thanks.

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Randy

From: Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Sent: Tuesday, August 21, 2018 3:52 PM
To: Landry, Jean; Nadeau, Simon
Cc: Moore, Wayne; Kennedy, Eddy
Subject: Getting ready.....

Two items wrt SRKW J-50:
Please be advised that J50 – the emaciated SRKW – has not been seen for a couple of days now. While way too soon to speculate on possible significance this is noteworthy given that her mother and other pod members have been observed multiple times during this period. There is significant presence on the water and we will advise if there is a update.

Also, FM has submitted an anticipatory request for science advice based on the recent lab analysis results that indicated feces collected from some (unknown) members of the J-Pod contained a parasite and that, as a consequence, NOAA may submit a request for a license amendment to administer parasite treatment in Canadian waters to J50 (if the whale is observed).

Science has begun preliminary work to address both of these issues.
Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
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Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

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Khanna, Sukriti

From: Harber, Lee
Sent: August-23-18 8:49 AM
To: Leslie, Karen; Brekke, Heather; Gallant, Nicole; MacConnachie, Sean; Eros, Carole; Moore, Kendra; Johansen, Jeff; Spence, Brenda; Cottrell, Paul; Nener, Jennifer; Cauffope, Genevieve; Galbraith, Ryan; Ho, Agatha; Hayes, Trish; Chmelnitsky, Elly; Malikian, Janine; Thar, Jonathan; Silverstein, Adam; Smith, Ken
Cc: Thomson, Andrew; Davis, Neil; Webb, Cheryl
Subject: RE: Weekly SRKW OPS Committee

Hi everyone,

For this morning's SRKW OPS committee meeting the agenda is as follows:

Standing items:

- J35 & J50 updates (Paul/Neil)
- RKW amended recovery strategy - consultations (Heather)
- SRKW IMAG (Lee)
- SRKW communications (Janine)
- SRKW engagement (Lee/Ken)
- Roundtable

Meeting minutes from last weeks meeting can be found on the regional share drive:
R:\FAM\SRKW OPS Committee\Meeting Minutes

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-23-18 9:50 AM
To: Cottrell, Paul; Harber, Lee; Scott, Paul G
Subject: SRKW Update Note
Attachments: MECTS-#3949687-v9-IN-Southern_Resident_Killer_Whale_Update.docx

Hi everyone,

Attached is today's SRKW update note for review. Any comments and your approval would be great.

Thanks,

Kendra

Page 3443

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est un duplicata de la

page 3452

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Dozie, Juachi

From: Lowe, Carmel
Sent: August-23-18 7:36 AM
To: Thomson, Andrew; Webb, Cheryl; Davis, Neil
Subject: SRKW [redacted]

[redacted]

Carmel

Organizer: Thomson, Andrew
When: 08:30 - 09:00 August 22, 2018
Subject: SRKW [redacted]
Location: Killer Whale 1-877-413-4781 ID: 7164844

Sent from my BlackBerry 10 smartphone on the Rogers network.

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

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Davis, Neil

From: Brekke, Heather
Sent: Thursday, August 23, 2018 4:44 PM
To: Hornby, Greg; Nener, Jennifer; Silverstein, Adam; Kennedy, Eddy; Doucette, Claire; Girouard, Louise
Cc: Davis, Neil
Subject: RE: SRKW

Hi everyone,

As per Neil's email below, we are going to need to move quite quickly would like to have a meeting/teleconference with this working group on Monday, August 27th, and then we will likely need to have input wrapped up within the week. Neil and I are meeting tomorrow morning to finalize the details, and I will send out more information and a meeting request for Monday.

Prior to that, please let me know if you have any questions on this topic or concerns.

Thank you,
Heather

From: Davis, Neil
Sent: August-22-18 12:52 PM
To: Nener, Jennifer; Doucette, Claire; Girouard, Louise
Cc: Thomson, Andrew; Webb, Cheryl; Carlson, Mike; Brekke, Heather
Subject: SRKW

Hi all,

NHQ SARA is leading the development of

We're looking for a participant from the Salmon team, C&P, and Comms to join participants from EMB, SARA, Fish Mgmt, and Science on this Working Group. I've asked Heather Brekke, the SARA Marine Team Lead to coordinate the working group, so she will be following up w the participants you identify to get this work underway as soon as possible. I expect we'll seek a few participants from NHQ as well.

Timelines are not totally clear yet, but it appears we have until around the end of the month to at least complete a first draft of this work.

Neil

Neil Davis
Director, Resource Management

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Fisheries and Oceans Canada | Government of Canada
Neil.Davis@dfo-mpo.gc.ca | Tel: (604) 666-0115

Directeur, Gestion des Ressources
Pêches et Océans Canada | Gouvernement of Canada
Neil.Davis@dfo-mpo.gc.ca | Tel: (604) 666-0115

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Davis, Neil

From: Davis, Neil
Sent: Thursday, August 23, 2018 6:51 AM
To: Brekke, Heather
Subject: Re: SRKW [redacted]

I would not wait. Eddy Kennedy is science contact. Start w just Carole from RM (plus salmon). For salmon, c and P and comms, just include the directors I emailed and they can attend or delegate. I have a few thoughts about how to structure the discussion, maybe we can discuss late thu afternoon when I get out of my IPHC mtg?

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Brekke, Heather
Sent: Wednesday, August 22, 2018 4:55 PM
To: Davis, Neil
Subject: RE: SRKW [redacted]

Hi Neil,

I haven't heard directly from any of the individuals you've sent this to. To be clear, I am waiting for this before I put forward a working group?

From previous discussions and your email, a WG could include:

Group/Sector	Staff
SARA	Heather (others: Lisa, Karen) NHQ: Corina
FM	RM: Carole (actor); others from RM? Neil to determine Salmon: TBD
EMB	Adam Silverstein
Science	?
C&P	?
Communications	?

Unknown staff members are identified in red text. Am I missing anyone?

Thanks
Heather

From: Davis, Neil
Sent: August-22-18 12:52 PM
To: Nener, Jennifer; Doucette, Claire; Girouard, Louise
Cc: Thomson, Andrew; Webb, Cheryl; Carlson, Mike; Brekke, Heather
Subject: SRKW [redacted]

Hi all,

s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

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NHQ SARA is leading the development of [redacted]

We're looking for a participant from the Salmon team, C&P, and Comms to join participants from EMB, SARA, Fish Mgmt, and Science on this Working Group. I've asked Heather Brekke, the SARA Marine Team Lead to coordinate the working group, so she will be following up w the participants you identify to get this work underway as soon as possible. I expect we'll seek a few participants from NHQ as well.

Timelines are not totally clear yet, but it appears we have until around the end of the month to at least complete a first draft of this work.

Neil

Neil Davis
Director, Resource Management
Fisheries and Oceans Canada | Government of Canada
Neil.Davis@dfo-mpo.gc.ca | Tel: (604) 666-0115

Directeur, Gestion des Ressources
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Neil.Davis@dfo-mpo.gc.ca | Tel: (604) 666-0115

s.21(1)(a)

s.21(1)(b)

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Dozie, Juachi

From: Brekke, Heather
Sent: August-23-18 8:10 AM
To: Davis, Neil
Cc: Harber, Lee; Jones, Lisa Ann
Subject: RE: Enhanced consultations for amended SRKW critical habitat

Thanks Neil,

I can make these changes. I know you're in a meeting all day – do you want me to check with Andy directly for support (given his ASAP request), or wait until you are back this afternoon?

Best
Heather

From: Davis, Neil
Sent: August-23-18 6:51 AM
To: Brekke, Heather
Cc: Harber, Lee; Jones, Lisa Ann
Subject: Re: Enhanced consultations for amended SRKW critical habitat

Thanks for putting this together Heather,

[redacted]

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Brekke, Heather
Sent: Wednesday, August 22, 2018 4:30 PM
To: Davis, Neil
Cc: Harber, Lee; Jones, Lisa Ann
Subject: RE: Enhanced consultations for amended SRKW critical habitat

Hi Neil,

[redacted]

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[redacted]

Lee/Lisa, please let me know if you have any suggestions.

Best
Heather

From: Davis, Neil
Sent: August-22-18 11:38 AM
To: Brekke, Heather; Harber, Lee
Cc: Hornby, Greg; MacConnachie, Sean
Subject: FW: Enhanced consultations for amended SRKW critical habitat
Importance: High

[redacted]

From: Thomson, Andrew
Sent: Wednesday, August 22, 2018 11:24 AM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Nener, Jennifer <Jennifer.Nener@dfo-mpo.gc.ca>; Stadel, Angela <Angela.Stadel@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Subject: Enhanced consultations for amended SRKW critical habitat

[redacted]

Andrew J L Thomson
Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada
Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
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Government of Canada | Gouvernement du Canada

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Mbarushimana, Jenny

From: Jenkins, Randy
Sent: August-23-18 2:00 PM
To: Lapointe, Sylvie; Waddell, Mark; Burns, Adam
Cc: Scott, Paul G; Moore, Kendra; Gilchrist, Brett; Davis, Neil
Subject: SRKW Updated Info Note
Attachments: MECTS-#3949687-v9-IN-Southern_Resident_Killer_Whale_Update.docx

Attached for your review and onward transmission is today's updated note with the latest info from the Pacific Region on the SRKW.
Thank you.

Randy

Randy P. Jenkins
Director - Integrated Resource Management – National Programs
Directeur - Gestion des ressources intégrées – Programmes nationale
Fisheries and Harbour Management / Gestion des pêchés et des ports
200 rue Kent Street, 13W065
Ottawa, Ontario, K1A 0E6

Tel/Tél: (613) 990-0018 Fax/Télécopieur: (613) 990-7051
E-Mail / Courriel: Randy.Jenkins@dfo-mpo.gc.ca

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Southern Resident Killer Whale Update

(August 23, 2018 – 1:00 EDT)

Issues: The deteriorating health condition of Southern Resident Killer Whale (SRKW) J50 of SRKW J-pod has prompted the U.S. National Oceanic and Atmospheric Administration (NOAA) to propose an emergency action plan to treat her. The response team located J50 on Thursday, August 9th and began sampling and treatment.

Update:

- K-pod and L-pod members were located offshore of the west coast of Vancouver Island yesterday August 22, 2018 and were monitoring from 14:00-18:00 PDT.
- J50 was last seen with her mother J16, who was foraging, off Carmanah Point travelling towards Nitnat in the evening of August 21, 2018.
- J-pod was not observed yesterday August 22, 2018, but is believe to be in offshore waters.
- Visibility for killer whale observations is poor due to the smoke from BC interior fires.

- DFO approved NOAA's application to include the following treatments for J50 within their Authorization to Disturb Marine Mammals: anti-parasitic treatment via a pole syringe or remote dart delivery, and the use of collared needles on darts to help the dart adhere to the whale.
    - DFO Science, as well as Dr. Steven Raverty (provincial marine mammal veterinarian) reviewed the application and concluded the application was justified, as well as including methods that are well tested and including personnel that are experienced.
    - DFO is drafting an amended Authorization to Disturb Marine Mammals to include these treatment options.
    - Currently, NOAA is authorized to conduct sampling of J50, including breath, fecal, mucus and skin; visual veterinary health assessment; and provide antibiotic treatment via pole syringe or remote delivery under the Authorization to Disturb Marine mammals pursuant to section 38 of the *Marine Mammal Regulations*, in addition to provisions under section 52 of the *Fisheries (General) Regulations* and section 74 of *Species at Risk Act* that was issued on August 9th.

- J35 was seen on Saturday August 11th travelling without her dead calf.

- The Northern Resident Killer Whale and Southern Resident Killer Whale amended Recovery Strategy consultations are currently underway.
    - The proposed amended Recovery Strategy (aRS) includes two additional areas as CH, as identified in a recent science advice report (CSAS SAR 2017/011). These include: 1) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (important for both NRKW and SRKW); and 2) waters of west Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit (important for NRKW).

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Dozie, Juachi

From: Harber, Lee
Sent: August-23-18 12:04 PM
To: Davis, Neil
Cc: Jones, Lisa Ann
Subject: SRKW IMAG - Next steps
Attachments: Follow up Invitation SRKW IMAG Nov. 1.docx

Hi Neil,

In terms of the forward agenda, I propose that we keep things simple and include a brief description of the forward agenda structure in the follow-up / save the date meeting invitation. When sending out the invite, we would also include the draft summary report and inform participants that we will provide a more detailed agenda, including materials, a few weeks in advance of the Nov. 1 meeting. I've attached a draft of the letter that would go out to participants from the RDG's office in the next week or so.

Meeting structure (as described in follow-up invite):

I. Standing item 1: Roundtable update on actions underway & recent developments
II. In Focus: key threat Prey Availability
III. Standing item 2: Opportunities for collaboration
IV. Roundtable

I met with Lisa yesterday and we feel we could work with regional colleagues to develop presentations under the 'Prey Availability theme' on 3 of the topics that were raised by participants. We would task out and work closely with the assigned leads to carefully scope out what is appropriate and realistic to provide information on to the advisory group. The proposed topics for part II of the agenda include:

Presentation Topic	Lead Group
1. Role of hatcheries to increase prey availability	SEP
2. Hydrophone Network and Data Collection Results	Science
3. Aerial Surveillance Program: SRKW Monitoring	C&P

Based on our last meeting with the secretariat group, I think this approach will be supported, but I will run this by them again next Tuesday.

Please let me know if you are okay with this approach.

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

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Fisheries and Oceans Canada

Regional Director General
Pacific Region
Suite 200 – 401 Burrard Street
Vancouver, British Columbia
V6C 3S4

Pêches et Océans Canada

Directrice générale régionale
Région du Pacifique
Piéce 200 – 401 rue Burrard
Vancouver C.-B.
V6C 3S4

Your file *Votre reference*
Our file *Notre reference*

Invitation to participate on the Southern Resident Killer Whale Indigenous and Multi-Stakeholder Advisory Group

Dear Participant,

On behalf of Fisheries and Oceans Canada, Transport Canada, and Environment and Climate Change Canada, we would like to thank you for your participation to date on in Southern Resident Killer Whale Indigenous and Multi-Stakeholder Advisory Group.

Our next meeting will take place on **November 1st, 2018 from 9-12PM in Vancouver**. We are currently exploring options for a venue that can accommodate the group and will provide updates as soon as we have secured a location.

At this meeting we will begin with roundtable updates from Federal officials on recent developments and priority actions underway, followed by presentations and a focused discussion on the key threat prey availability, and in the last part of the meeting federal departments will share information on activities where there may be opportunity for collaboration with external parties.

Also, please find attached a draft summary report from our last meeting that was held on July 30.

Please RSVP to the DFO Marine Mammal Advisor, Mr. Lee Harber, at Lee.Harber@dfo-mpo.gc.ca by **September 15th.**

Yours sincerely,

Rebecca Reid
Regional Director General
Pacific Region

Canada

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Mbarushimana, Jenny

From: Jones, Lisa Ann
Sent: August-24-18 10:02 AM
To: Fershau, Jonathan; Brekke, Heather
Cc: Makkay, Kristina
Subject: RE: For Approval: Media Lines - Amended Resident Killer Whale Recovery Strategy
Attachments: QA_AmendedRecoveryStrategy_RKW_Update (3)_lj.docx

Hi Jonathan,

I have provided a few edits on this version.

Cheers
Lisa

From: Fershau, Jonathan
Sent: August-24-18 8:06 AM
To: Brekke, Heather; Jones, Lisa Ann
Cc: Makkay, Kristina
Subject: FW: For Approval: Media Lines - Amended Resident Killer Whale Recovery Strategy
Importance: High

Hi Heather,
I gather you reviewed an earlier version of these media lines. Any additional comments/edits?
Response requested ASAP.

Thanks,

Jonathan

From: Makkay, Kristina
Sent: August-24-18 6:54 AM
To: Fershau, Jonathan
Cc: Stewart, Julie; Thorleifson, Erika
Subject: FW: For Approval: Media Lines - Amended Resident Killer Whale Recovery Strategy
Importance: High

Here is a Q&A for Resident KWhale. Could you look them over before we send them on?

Thanks,

Kristina Makkay
Acting Corina Busby

From: Stewart, Julie
Sent: August-23-18 8:27 PM
To: Payne, Matthew
Cc: Smith, Kathleen; Fagan, Ashley; Love, Lindsay; Makkay, Kristina
Subject: RE: For Approval: Media Lines - Amended Resident Killer Whale Recovery Strategy

s.16(2)
s.21(1)(a)
s.21(1)(b)
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We're on it. Will get you something asap tomorrow.

Julie Stewart
Director / Directrice
Species at Risk Program / Programme des Espèces en Péril
200 rue Kent St.
Station 10W061
Ottawa, ON
K1A 0E6

(613) 949-7524 (t)
[redacted] (c)

Julie.stewart@dfo-mpo.gc.ca

From: Payne, Matthew
Sent: Thursday, August 23, 2018 1:56 PM
To: Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>
Cc: Smith, Kathleen <Kathleen.Smith@dfo-mpo.gc.ca>; Fagan, Ashley <Ashley.Fagan@dfo-mpo.gc.ca>; Love, Lindsay <Lindsay.Love@dfo-mpo.gc.ca>
Subject: For Approval: Media Lines - Amended Resident Killer Whale Recovery Strategy
Importance: High

Hi Julie

Pacific Region has updated the Media Lines for the amended RKW Recovery Strategy with additional content (see yellow highlights on pg. 1 & 4).
I will send over to C&P to see if they can provide content as suggested by the Region.
If you could please review, approve and return to be by cob today, that would be much appreciated.

Thank you
Matt

From: Malikian, Janine
Sent: August-23-18 1:45 PM
To: Payne, Matthew
Cc: ComApproval / Approbation (DFO/MPO); Smith, Kathleen; Parkes, Sara
Subject: RE: Amedned Resident Killer Whale Recovery Strategy Communication update

Hi Matt,

Here are the updated lines / Qs and As, regionally approved.

Not a lot of changes – 2 new bullets (highlighted).

[redacted]

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Thanks,

Janine

From: Payne, Matthew
Sent: August-22-18 8:30 AM
To: Malikian, Janine
Cc: ComApproval / Approbation (DFO/MPO); Smith, Kathleen; Parkes, Sara
Subject: FW: Amedned Resident Killer Whale Recovery Strategy Communication update

Janine

The RKW Recovery Strategy is scheduled to be posted on August 27.
Can you please provide a status update on the Media Lines.

Thank you
Matt

From: Chiu, Scott
Sent: August-22-18 11:22 AM
To: Payne, Matthew
Cc: Smith, Kathleen; Demaray, Susan; Young, Jessica
Subject: Amedned Resident Killer Whale RS Communication update

FYI, the document has reached MinO; we are still preparing for posting it on Aug 27.

Scott Chiu
Biologist, Species at Risk Program Management / Espèces en péril
Fisheries and Oceans Canada / Pêches et Océans Canada
10W053, 200 rue Kent Street
Ottawa, Ontario
K1A OE6
E-mail / Courriel: Scott.Chiu@dfo-mpo.gc.ca
Téléphone: 613-295-8368

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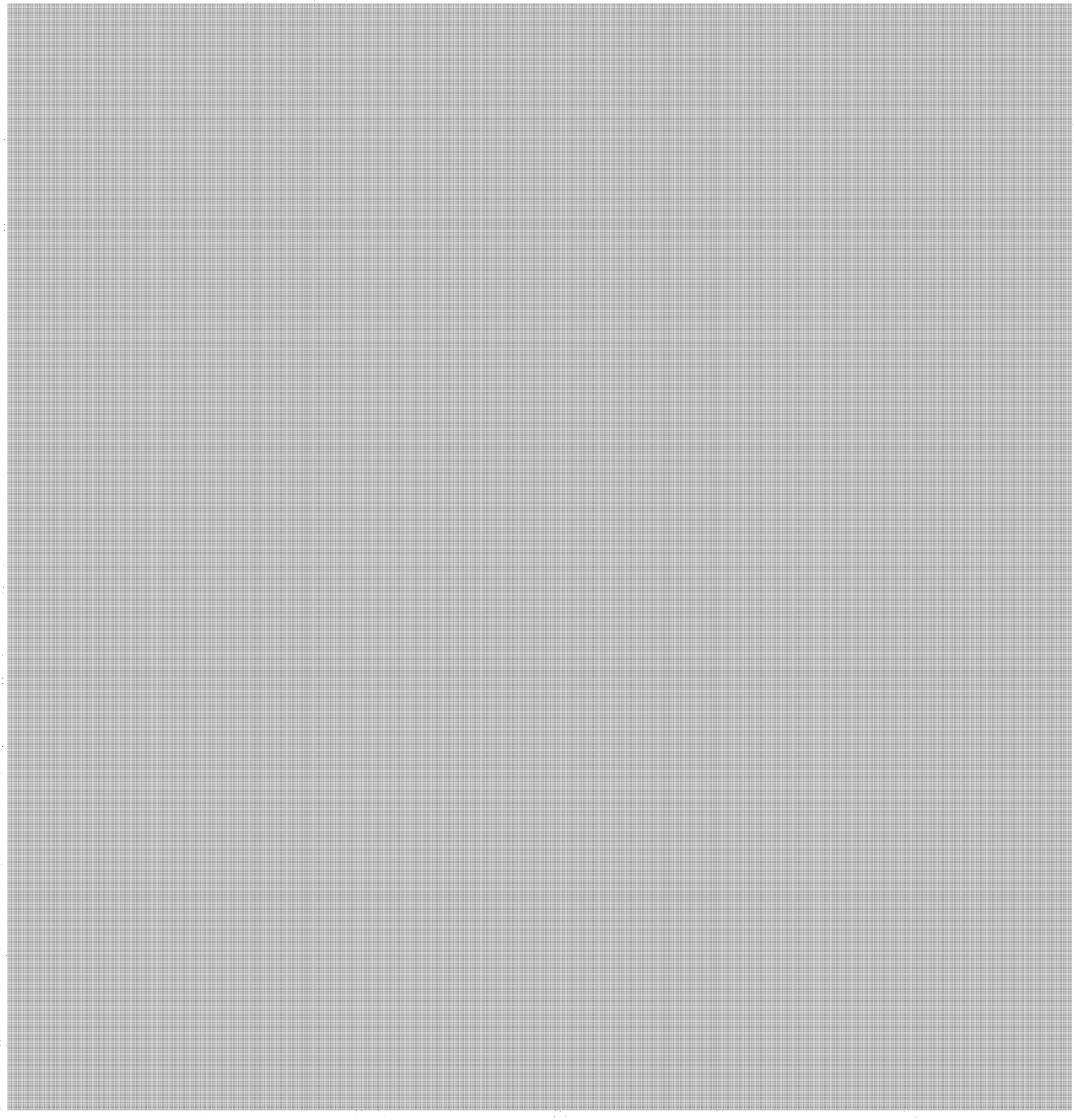
s.21(1)(a)

s.21(1)(b)

DRAFT

KEY MESSAGES / QUESTIONS AND ANSWERS

Consultation On Proposed Amended Recovery Strategy For Northern And Southern Resident Killer Whales



Pages 3459 to / à 3461
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

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Mbarushimana, Jenny

From: Jones, Lisa Ann
Sent: August-24-18 2:03 PM
To: Brekke, Heather
Subject: RE: summary of WA EO prey working group
Attachments: MoreDetailed_Predation_Chinook_SRKW_WDFW_08.21.18.pdf; SKRW Prey Matrix SUMMARY 8 23 18 Final.pdf; SRKW Task Force Meeting 8-28-18 Discussion Guide Predation.pdf

Hi Heather,

I have updated the summary doc with the information I received from Penny this morning.

I have now included description of materials that are being provided for the next Task Force meeting and have highlighted in a list the priority actions being looked at for predation (they will be looking at hydro and vessels too but figure the predation is the key piece for DFO and if they want the other info we can provide).

I have also updated the projected meetings for the Task Force – they are not planning to get through all actions at next meeting but rather focusing on predation, hydro and vessels as this is where there is the most uncertainty/questions.

I have attached here so you can include in email to Andy and Neil –

- the overall matrix for prey actions from the working group
- discussion guide for predation actions
- summary 2-page doc that is specific to predation and the issue with management action on pinnipeds and birds (basically need more science input and full review process).

Let me know if you want any further info summarized.

Cheers
Lisa

From: Jones, Lisa Ann
Sent: August-23-18 2:03 PM
To: Brekke, Heather
Subject: summary of WA EO prey working group

Hi Heather,

Have put a brief summary of the prey working group meetings over the last couple of months and what the next steps are here .

I have asked if Penny can share the prey actions report that has been sent to the Task Force for review at the next meeting on August 28th but have yet to receive this. The document I do have that was being worked on to submit to the Task Force from the prey working group is 88 pages so I have not included it here as it is large and was still a draft version (but it is in the folder where the attached document is located).

Let me know if there was anything further that would be useful to include and I can edit accordingly.

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Cheers
Lisa

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

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Khanna, Sukriti

From: Barton, Meagan
Sent: August-24-18 10:46 AM
To: Davis, Neil; Harber, Lee; Cottrell, Paul
Subject: FW: URGENT!! Info on J50 Fecal Sample!

Importance: High

Additional info

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

From: Kaba, Kyle
Sent: August-24-18 10:34 AM
To: Lowe, Carmel; Thomson, Andrew
Subject: FW: URGENT!! Info on J50 Fecal Sample!
Importance: High

Carmel/Andy – Urgent request from MINO. They are looking for a few lines that can be shared publicly on the results of the fecal sample for J50. Randy Jenkins has provided the following:

***
We do not know for sure that the sample that was taken is from J50.... There were 3 whales in the group (J50 being 1) that may have pooped or contributed to the sample. What we did say in one of our updates was

- Fecal analysis from the sample collected on August 12th indicates the presence of moderate levels of a nematode parasite.
    - In healthy animals, the presence of nematodes is not a problem; however in emaciated or otherwise compromised marine mammals, the parasite can cause additional issues, such as bacterial infection in the blood or bore into internal organs.

Confirmed this info was made public (CBC reported on Aug 18).

Can you please review and let me know if there's anything further to add.

Thanks
Kyle

From: Patrick, Lindsey
Sent: August-24-18 10:20 AM
To: Kaba, Kyle; White, Andrea
Subject: FW: URGENT!! Info on J50 Fecal Sample!

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We did say it publically – CBC reported on it on August 18

From: Jenkins, Randy
Sent: August-24-18 1:16 PM
To: Patrick, Lindsey
Cc: Gilchrist, Brett; Moore, Kendra
Subject: RE: URGENT!! Info on J50 Fecal Sample!

YES... CBC reported on the 18th August

https://www.cbc.ca/news/canada/british-columbia/researchers-lead-cause-distressed-killer-whale-j-50-illness-1.4790442

U.S. researchers have examined samples gathered from an ailing three-year-old orca swimming off the West Coast and say a parasite may be the reason the young killer whale is so thin.

The scientists tested fecal samples gathered last weekend from three members of the whale's pod — called J-pod — including J-50.

They found a moderate level of a parasite known as Contracaecum, according to a release from the U.S. National Oceanic and Atmospheric Administration (NOAA).

The worm is not usually a problem in healthy animals, the statement from NOAA said, but in thin, weak or compromised animals the parasite can penetrate the stomach lining and cause a bacterial infection in the bloodstream or bore into internal organs.

Officials say they can't be sure the positive sample came from J-50, but their veterinary team treating the orca will use a dewormer with an antibiotic in upcoming treatments.

NOAA says the treatment will help reduce the bacterial and parasitic burden on its system, so it can begin to regain lost weight.

From: Patrick, Lindsey
Sent: Friday, August 24, 2018 1:13 PM
To: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Subject: RE: URGENT!! Info on J50 Fecal Sample!

Is this public

From: Jenkins, Randy
Sent: August-24-18 1:11 PM

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To: Patrick, Lindsey
Subject: RE: URGENT!! Info on J50 Fecal Sample!

We do not know for sure that the sample that was taken is from J50.... There were 3 whales in the group (J50 being 1) that may have pooped or contributed to the sample. What we did say in one of our updates was

- Fecal analysis from the sample collected on August 12th indicates the presence of moderate levels of a nematode parasite.
    - In healthy animals, the presence of nematodes is not a problem; however in emaciated or otherwise compromised marine mammals, the parasite can cause additional issues, such as bacterial infection in the blood or bore into internal organs.

From: Patrick, Lindsey
Sent: Friday, August 24, 2018 1:06 PM
To: Gilchrist, Brett <Brett.Gilchrist@dfo-mpo.gc.ca>; Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Subject: FW: URGENT!! Info on J50 Fecal Sample!

Who should we ask – or do you have this information

From: Jarjour, Jasmine
Sent: August-24-18 12:56 PM
To: Butcher, Ashley; Kaba, Kyle; White, Andrea; Richter, Julie; Patrick, Lindsey
Cc: Hirani, Samia; Khwaja, Saba; Kahn, Zoe
Subject: Re: URGENT!! Info on J50 Fecal Sample!

Am including Lindsey too...

From: Butcher, Ashley
Sent: Friday, August 24, 2018 12:44 PM
To: Kaba, Kyle; White, Andrea; Richter, Julie
Cc: Jarjour, Jasmine; Hirani, Samia; Khwaja, Saba; Kahn, Zoe
Subject: URGENT!! Info on J50 Fecal Sample!

Hi - I have no idea who to ask but I'm urgently looking for a sentence or two that can be shared publicly on the results of the fecal sample for J50?

Thanks!!!

Ashley

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Khanna, Sukriti

From: Barton, Meagan
Sent: August-24-18 10:43 AM
To: Davis, Neil; Cottrell, Paul; Thomson, Andrew; Harber, Lee
Subject: URGENT - Need one line for RKW deck for DM

Importance: High

Julie Richter just called Andy's line and urgently needs (she said the next 5 mins) a line/bullet point for the SRKW deck they touching up on the recent fecal sampling for J50 – something that is ok to send out to the public.

Her contact details below.
1-613-990-5393
Julie Richter

Meagan Barton
Executive Assistant to the Regional Director Fisheries Management
Fisheries and Oceans Canada | Government of Canada
meagan.barton@dfo-mpo.gc.ca | Tel : 604-666-0753

Adjointe exécutive au Directeur Régionale, Direction de la gestion des pêcheries
Pêches et Océans Canada | Gouvernement du Canada
meagan.barton@dfo-mpo.gc.ca | Tél : 604-666-0753

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Khanna, Sukriti

From: Kristin Wilkinson - NOAA Federal <[redacted]
Sent: August-24-18 3:17 PM
To: Cottrell, Paul
Subject: Re: SARA license application

Paul,

Thank you for the amended letter of authorization. This has been shared with our on water team and we are hopeful we can respond to J50 once they are back in the area - the team is on standby waiting for that opportunity.

Kristin

On Fri, Aug 24, 2018 at 12:49 PM, Cottrell, Paul <Paul.Cottrell@dfo-mpo.gc.ca> wrote:

Hi Teri,

Attached is the approved amended letter of authorization for the collared darting and administering of anti-parasitic medication to J50. Section I, numbers 7 & 8 were added. Thanks for all your efforts to ensure J50 has the best chance possible. Let me know if you have any questions and if you accept the letter of authorization as written.

Best,

Paul

From: Teri Rowles - NOAA Federal [mailto[redacted]
Sent: August-22-18 11:00 AM
To: Lynne Barre - NOAA Federal
Cc: Cottrell, Paul; Thornton, Sheila; Greene, Annely; Deborah Fauquier - NOAA Affiliate; Brad Hanson; Sarah Wilkin; Candice Emmons; Kristin Wilkinson
Subject: Re: SARA license application

Paul, Enclosed is the amendment to the SARA license for response to J50. As Kristin discussed with you we have added an anthelminic (anti-parasitic) to the treatment regime based on the fecal sample results identifying *contracaecum* parasites and have added the potential use of a collared needle for the dart. Please let us know if there are any questions.

THANK YOU

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On Thu, Aug 9, 2018 at 3:40 PM, Lynne Barre - NOAA Federal [redacted] wrote:

Hi Paul,

Attached is the completed SARA license application form along with the application document submitted yesterday. I've also attached documentation of Animal Care Committee compliance for the activities approved under the US NMFS Permit No. 18786-03.

I believe that Brad Hanson has already applied for foreign vessel clearance, but am awaiting confirmation. I can send along a photo of the vessel as soon as I get one from the team.

Please let us know if you need anything else and please provide confirmation that work can proceed in Canadian waters or a copy of the license or as soon as it is available.

Thanks,

Lynne

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

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Khanna, Sukriti

From: MacConnachie, Sean
Sent: August-24-18 10:36 AM
To: Nadeau, Simon; Kennedy, Eddy; Thornton, Sheila; Cottrell, Paul
Cc: Landry, Jean
Subject: Re: URGENT!! Info on J50 Fecal Sample!

I'm on the road back to the island but I haven't heard any updates.

Paul anything from you?

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Nadeau, Simon
Sent: Friday, August 24, 2018 10:20 AM
To: Kennedy, Eddy; MacConnachie, Sean; Thornton, Sheila
Cc: Landry, Jean
Subject: TR: URGENT!! Info on J50 Fecal Sample!

Guys, any info on this for MINO?

[redacted]

De : Baldwin, Jennifer
Envoyé : 24 août 2018 13:15
À : Nadeau, Simon; Kling, Ashley
Cc : Landry, Jean
Objet : FW: URGENT!! Info on J50 Fecal Sample!
Importance : Haute

From: White, Andrea
Sent: August-24-18 1:12 PM
To: Landry, Jean
Cc: Moore, Wayne; Baldwin, Jennifer
Subject: RE: URGENT!! Info on J50 Fecal Sample!
Importance: High

OK – now it's official. Do you have info on this? Maybe from some daily whale report that Pacific RDGO mentioned (????)?

From: White, Andrea
Sent: August-24-18 1:06 PM
To: 'Landry, Jean (Jean.Landry@dfo-mpo.gc.ca)'
Cc: Moore, Wayne
Subject: FW: URGENT!! Info on J50 Fecal Sample!

I do not have confirmation from Pacific Region yet that they are 'on it'. Just in case they punt it to us...do you have anything readily available on the Q below?

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From: Jarjour, Jasmine
Sent: August-24-18 12:56 PM
To: Butcher, Ashley; Kaba, Kyle; White, Andrea; Richter, Julie; Patrick, Lindsey
Cc: Hirani, Samia; Khwaja, Saba; Kahn, Zoe
Subject: Re: URGENT!! Info on J50 Fecal Sample!

Am including Lindsey too...

From: Butcher, Ashley
Sent: Friday, August 24, 2018 12:44 PM
To: Kaba, Kyle; White, Andrea; Richter, Julie
Cc: Jarjour, Jasmine; Hirani, Samia; Khwaja, Saba; Kahn, Zoe
Subject: URGENT!! Info on J50 Fecal Sample!

Hi - I have no idea who to ask but I'm urgently looking for a sentence or two that can be shared publicly on the results of the fecal sample for J50?

Thanks!!!

Ashley

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Khanna, Sukriti

From:	Cottrell, Paul
Sent:	August-24-18 12:15 PM
To:	Thomson, Andrew; Davis, Neil
Cc:	Greene, Annely
Subject:	Amended NOAA Licence to administer anti-parasitic medication in Canadian Waters
Attachments:	Amended Authorization Final for J50 NOAA_SECTION_38_AUTHORIZATION_AUG 23 2018 .doc

Hi Andy & Neil,
Amended letter of authorization attached for review. Only Section I, paragraph numbers 7 and 8 have been amended. The amended letter of authorization allows for anti-parasitic medication treatment and the use of collared darts on J50 in Canadian waters. Dr Teri Roles (NOAA) is the licencee.
Cheers,
Paul

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039, NE PACIFIC SOUTHERN RESIDENT KILLER WHALE J50- AMENDMENT

AUTHORIZATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL

PURSUANT TO SECTION 38 OF THE *MARINE MAMMAL REGULATIONS*, SECTION 52 OF THE *FISHERY (GENERAL) REGULATIONS*, AND SECTION 74 OF THE *SPECIES AT RISK ACT*, THIS AUTHORIZATION IS HEREBY GIVEN TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL. THE AUTHORIZATION IS VALID ANYWHERE IN CANADIAN FISHERIES WATERS IN THE PACIFIC OCEAN WHERE FISHERIES AND OCEANS CANADA (DFO) ADMINISTERS THE AQUATIC RESOURCES AND OCEAN SPACE.

THE AUTHORIZATION IS VALID ONLY IN ACCORDANCE WITH THE FOLLOWING CONDITIONS SPECIFIED PURSUANT TO SUBSECTION 38(2) OF THE *MARINE MAMMAL REGULATIONS*:

1. THE OPERATIONS AUTHORIZED UNDER THIS AUTHORIZATION WILL INCLUDE THE FOLLOWING:

I) INTERACTING WITH A MARINE MAMMAL INCLUDING KILLER WHALES FOR THE PURPOSES OF;

1. RESPIRATORY SAMPLES WILL BE COLLECTED VIA PETRI DISHES MOUNTED ON THE END OF A CARBON FIBER POLE HELD JUST OVER THE BLOWHOLE. THE VESSEL CLOSELY APPROACHES THE WHALE TO WITHIN THE REACH OF THE POLE (5 METERS OR LESS), PERPENDICULAR TO THE WHALE, AND THE POLE IS LOWERED OVER THE BLOWHOLE TO CATCH THE EXPIRED AIR. RESPIRATORY SAMPLES TAKEN WILL BE ANALYZED FOR POTENTIAL PATHOGENS AND OTHER HEALTH INDICATORS USING CYTOLOGY, CULTURE AND MOLECULAR METHODS.

2. FECAL SAMPLES WILL BE COLLECTED OPPORTUNISTICALLY WHENEVER POSSIBLE WHEN VISUALLY DETECTED FLOATING ON THE WATER. FECAL SAMPLES COLLECTED THIS WAY CAN YIELD ANAYLSES OF NUTRITION, HORMONES (E.G., STRESS, REPRODUCTIVE), TOXINS, AND DNA (TO IDENTIFY SUBJECT WHALE AND PREY SPECIES). SMALL FECAL SAMPLES WILL BE COLLECTED ON STERILE GAUZE SEALED IN ZIP LOCKS AND PLACED IMMEDIATELY IN COOL STORAGE. LARGER FECAL SAMPLES WILL BE COLLECTED IN TUBES AND IMMEDIATELY PLACED IN A COOLER.
   NOTE: WHILE ALL EFFORTS WILL BE MADE TO COLLECT FECES FROM J-50, IDENTIFICATION OF WHICH ANIMAL DEFECATED IS NOT ALWAYS IMMEDIATELY POSSIBLE IN THE FIELD, AND ANY AVAILABLE SAMPLE WILL BE COLLECTED.

3. MUCUS SAMPLES WILL BE COLLECTED OPPORTUNISTICALLY WHENEVER POSSIBLE WHEN VISUALLY DETECTED FLOATING ON THE WATER. MUCUS SAMPLES CAN YIELD ANALYSES OF HORMONES AND PATHOGENS, AMONG OTHERS. MUCUS SAMPLES WILL BE COLLECTED ON STERILE GAUZE AND PLACED IN COLD STORAGE.
   NOTE: WHILE ALL EFFORTS WILL BE MADE TO COLLECT MUCUS FROM J-50, IDENTIFICATION OF WHICH ANIMAL THE MUCUS IS FROM MAY NOT ALWAYS BE IMMEDIATELY POSSIBLE IN THE FIELD, AND ANY AVAILABLE SAMPLE WILL BE COLLECTED.

4. IF SKIN DISCOLORATIONS OR ABNORMALITIES ARE OBSERVED (AS HAS BEEN PREVIOUSLY NOTED CAUDAL TO THE BLOWHOLE AND ON THE FLUKES), SKIN SAMPLES WILL BE OBTAINED THROUGH A ROUGHENED COLLECTOR (DISH SCRUBBIE OR SIMILAR) ON THE END OF A 5 M POLE. THE VESSEL CLOSELY APPROACHES THE WHALE TO WITHIN THE REACH OF THE POLE (5 METERS OR LESS), PERPENDICULAR TO THE WHALE, AND THE POLE IS LOWERED INTO CONTACT WITH

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THE DISCOLORED SKIN. SKIN SCRAPE SAMPLES WILL BE ANALYZED TO IDENTIFY POTENTIAL PATHOGENS.

5. VETERINARY HEALTH ASSESSMENT IS CONDUCTED VISUALLY BY A VETERINARIAN, WITH PHOTO AND VIDEO DOCUMENTATION. THIS ASSESSMENT WILL LIKELY BE CONDUCTED SIMULTANEOUSLY WITH THE CLOSE APPROACHES TO COLLECT THE SAMPLES LISTED ABOVE, AND WOULD LIKELY NOT REQUIRE ADDITIONAL APPROACHES. HEALTH ASSESSMENT WILL INCLUDE OBSERVATIONS OF BODY CONDITION AND BEHAVIOR, FROM VARIOUS MARINE VESSELS, DRONE OBSERVATIONS, AND FROM SHORE (WHEN POSSIBLE). PHOTOS (HIGH RESOLUTION) AND VIDEO (1080P AND GREATER RESOLUTION) WILL BE COLLECTED FROM ALL PLATFORMS UTILIZED, AND IMAGES WILL BE USED FOR COMPARISONS AND ONGOING ASSESSMENT. BEHAVIORAL PATTERNS WILL BE MONITORED AS OFTEN AS POSSIBLE THROUGHOUT THE RESPONSE. BEHAVIORAL ETHOGRAMS MAY BE DEVELOPED FOR THIS PURPOSE WITH A DEDICATED OBSERVER COLLECTING THIS DATA FOR FUTURE ANALYSIS. PARAMETERS THAT WILL BE MONITORED AND RECORDED INCLUDE:
   - RESPIRATORY RATE (# RESPIRATIONS/5 MINUTES)
   - BLOW ODOR
   - DEFECATION FREQUENCY
   - POSITION AND DISTANCE RELATIVE TO J16 (OR OTHER CLOSELY ASSOCIATED POD MEMBERS)
   - FORAGING ACTIVITY; % TIME SPENT LOGGING

6. INITIAL MEDICAL TREATMENT VIA DELIVERY OF ANTIBIOTICS BY INJECTION, EITHER VIA POLE SYRINGE OR REMOTE DELIVERY DART SYSTEM. INJECTIONS WILL BE ADMINISTERED INTO THE EPAXIAL OR OTHER LARGE MUSCLE MASS. NEEDLE LENGTH WILL BE APPROXIMATELY 2". ALL INJECTIONS WILL BE SUPERVISED BY A VETERINARIAN.

   MEDICATIONS LIST IN ORDER OF PRIORITY (AS ADVISED BY VETERINARY TEAM). THE ANTIBIOTICS ON THIS LIST ARE INTENDED TO ADDRESS THE RANGE OF BACTERIAL INFECTIONS J50 IS SUSCEPTIBLE TO.
   - 2000-3000MG CONVENIA, SQ OR IM ONCE (600KG X 5 MG/KG) – ONE DOSE WOULD PROVIDE 7-14 DAYS EFFICACY; OR
   - 2000-3000 MG EXCEDE SQ OR IM ONCE (600KG X 5 MG/KG) – ONE DOSE WOULD PROVIDE 5-10 DAYS EFFICACY

   *ANTIBIOTIC DRUG CHOICE MAY CHANGE BASED ON DIAGNOSTIC FINDINGS. ANY NEW DRUG CHOICES & DOSAGES WILL BE PROVIDED TO DFO AS NEEDED PRIOR TO USE.

7. PROVIDING ANTI-PARASITIC TREATMENT FROM THE NWFSC OR SEADOC BOAT VIA POLE SYRINGE OR REMOTE DELIVERY. ADDITIONAL MEDICATIONS MAY BE DEEMED NECESSARY IN HER TREATMENT AND THOSE WILL BE DISCUSSED IN ADVANCE OF ANY DEVIATION FROM THOSE INDICATED. INJECTIONS WILL BE ADMINISTERED INTO THE EPAXIAL MUSCLE GROUP OR THE SUBCUTANEOUS TISSUE IN THE SAME AREA. NEEDLE WILL BE APPROXIMATELY 2" AND 40MM. ALL INJECTIONS WILL BE SUPERVISED OR ADMINISTERED BY AN EXPERIENCED VETERINARIAN. THE ANTI-PARASITIC TREATMENT IS INTENDED TO ADDRESS A PARASITE INFECTION INDICATED THROUGH EXAMINATION OF A FECAL SAMPLE COLLECTED IN HER VICINITY.
   - 1 10 MILLIMETER IVERMECTIN THROUGH 10ML DART – ONE TIME DOSAGE (0.2 MG/KG)
   - LITTLE TO NO RISK TO J50, IVERMECTIN HAS BEEN GIVEN TO OTHER MARINE MAMMALS WITHOUT ANY ADVERSE EFFECTS, HOWEVER INJECTIONS OF 10 ML MAY RESULT IN LOCALIZED INFLAMMATION OR SWELLING.

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8. USE OF COLLARED NEEDLES IF THE UNCOLLARED NEEDLE ON THE DART THAT IS NORMALLY USED BOUNCES OFF WITHOUT FULL DELIVERY OF ANTIBIOTICS AND THE PARASITE TREATMENT, THEN THE VETERINARIANS MAY SWITCH TO A COLLARED NEEDLE WITH A RIDGE THAT HOLDS IT IN PLACE LONGER TO DELIVER THE FULL DOSE. THIS WILL DECREASE THE NUMBER OF APPROACHES/DARTS NEEDED AND INCREASE THE PROBABILITY OF DELIVERING THE FULL DOSE IN ONE SHOT. THIS TYPE OF DART IS COMMONLY USED TO REMOTELY DART WILDLIFE SUCH AS ELEPHANTS AND IS DESIGNED TO FALL OUT AND BE RECOVERED WHEN THE ANIMAL IS HANDLED. THE TEAM OF VETERINARIANS HAS WEIGHED THE OPTIONS AND CONCLUDED THAT THE EXPECTED BENEFITS FROM RECEIVING THE MEDICATIONS AT THIS CRITICAL TIME ARE SUBSTANTIAL, AND THE DART IS LIKELY TO COME OUT IN HOURS TO LESS THAN A DAY. THE DART POSSIBLY REMAINING IN THE ANIMAL FOR A PERIOD OF TIME MAY CAUSE INFLAMMATION AND SWELLING OF THE AREA.

II) APPROACHING A KILLER WHALE WITH A VEHICLE WITHIN A DISTANCE OF LESS THAN 200 METRE DISTANCE;

III) DOCUMENTATION AND PHOTOGRAPHY OF MARINE MAMMALS;

IV) THE COLLECTION OF ANY BIOLOGICAL SAMPLES REQUESTED FROM FISHERIES AND OCEANS CANADA.

1. COLLECTION OF BREATH/BLOW SAMPLE
2. COLLECTION OF FECAL SAMPLE
3. COLLECTION OF OTHER SAMPLES OPPORTUNISTICALLY AVAILABLE (E.G., MUCUS AND SKIN)
4. IF SKIN DISCOLORATION IS NOTED, COLLECTION OF SKIN SCRAPINGS FROM DISCOLORED AREA
5. COMPLETION OF A VISUAL VETERINARY HEALTH ASSESSMENT AND PHOTO/VIDEO DOCUMENTATION
6. PROVIDING ANTIBIOTIC TREATMENT FROM THE NWFSC BOAT VIA POLE SYRINGE OR REMOTE DELIVERY.

ALL SAMPLES WILL BE COLLECTED BY A RESPONSE TEAM ON A SINGLE BOAT (A NOAA VESSEL). THE COMPOSITION OF THE TEAM WILL VARY DEPENDING UPON THE DAY, BUT A COMPLETE LIST OF POTENTIAL PERSONNEL IS LISTED.

2. THE AUTHORIZED PERSONNEL FOR THE ABOVE OPERATIONS SHALL BE AS FOLLOWS:

LEAD DR. TERRI ROWLES, THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

RESPONSE TEAM MEMBERS

DR. JOE GAYDOS (SEADOC) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

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DR. JIM MCBAIN (SEA WORLD) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. HENDRIK NOLLENS (SEA WORLD) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. MARTIN HAULENA (VANCOUVER AQUARIUM) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. BRAD HANSON (NOAA) SAMPLE COLLECTION AND VESSEL DRIVER

CANDICE EMMONS (NOAA) SAMPLE COLLECTION AND VESSEL DRIVER

JEFF FOSTER (WHALE SANCTUARY PROJECT) SAMPLE COLLECTION AND VESSEL DRIVER

KATY FOSTER (WHALE SANCTUARY PROJECT) SAMPLE COLLECTION AND VESSEL DRIVER

TREVOR FOSTER (RESEARCH TECH) SAMPLE COLLECTION AND VESSEL DRIVER

*A STAFF MEMBER WILL BE IDENTIFIED FOR PHOTO AND/OR VIDEO DOCUMENTATION.

ACTIVITIES CARRIED OUT UNDER THE AUTHORITY OF THIS AUTHORIZATION SHALL ONLY BE CONDUCTED UNDER THE DIRECT SUPERVISION OF THE AUTHORIZATION HOLDER OR AUTHORIZED INDIVIDUALS AS LISTED ABOVE. THE AUTHORIZATION HOLDER IS RESPONSIBLE TO ENSURE THAT AN AUTHORIZED INDIVIDUAL IS PRESENT DURING ANY ACTIVITY AUTHORIZED UNDER THIS AUTHORIZATION.

3. THE RESPONSE ACTIVITY SHALL TAKE PLACE IN THE WATERS OF THE PACIFIC REGION THAT ARE PARTS OF AREAS UNDER THE ADMINISTRATION OF DFO;

4. THE FOLLOWING DFO REGIONAL STAFF SHALL BE ADVISED IMMEDIATELY ON COMMENCEMENT OF ANY OPERATIONS: PACIFIC REGION: PAUL COTTRELL (604) 240-3841

5. AN INCIDENT REPORT SHALL BE MADE DETAILING SPECIES IDENTIFICATION, EFFORTS MADE TO SAVE THE ANIMAL, CONDITION OF THE ANIMAL AT THE COMMENCMENT AND AT THE END OF THE OPERATON, LOCATION (COORDINATES) OF THE OPERATION, NAMES OF ALL INVOLVED IN THE OPERATION, ANY OTHER OBSERVATIONS RELEVANT TO INCIDENT;

6. A QUARTERLEY REPORT INCLUDING LOCATIONS, SPECIES, NUMBERS AND OBSERVATIONS SHALL BE PROVIDED TO DFO PACIFIC REGION REGIONAL COORDINATOR:
PAUL COTTRELL, PAUL.COTTRELL@DFO-MPO.GC.CA

7. THAT A COPY OF THIS AUTHORIZATION SHALL BE CARRIED BY ALL PERSONNEL ENGAGED IN THE RESPONSE OPERATIONS. GOVERNMENT ISSUED IDENTIFICATION DOCUMENTS ARE REQUIRED FOR ANYONE ACTING UNDER THE AUTHORITY OF THIS AUTHORIZATION. THE AUTHORIZATION AND ANY PERSON WORKING UNDER ITS AUTHORITY MUST BE AVAILABLE FOR INSPECTION UPON REQUEST BY A FISHERY OFFICER OR FISHERY GUARDIAN;

8. THE AUTHORIZATION HOLDER MUST HAVE APPROPRIATE, CURRENT LIABILITY INSURANCE AND/OR APPROPRIATE, CURRENT WORKERS COMPENSATION COVERAGE IN PLACE THAT COVERS ACTIVITIES UNDERTAKEN IN ALL PROVINCES COVERED BY THIS AUTHORIZATION THROUGHOUT THE DURATION OF THE CONTRACT. COPIES OF THIS DOCUMENTATION MUST BE PROVIDED TO THE DFO IN ADVANCE OF COMMENCEMENT OF THE AUTHORIZED ACTIVITIES.

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9. THE AUTHORIZATION HOLDER AGREES THAT IT IS FULLY LIABLE FOR ANY DAMAGES THAT IT CAUSES TO ANY THIRD PARTY IN CONNECTION WITH ACTIVITIES AUTHORIZED BY THE AUTHORIZATION, REGARDLESS OF WHETHER THE THIRD PARTY MAKES ITS CLAIM AGAINST CANADA OR THE AUTHORIZATION HOLDER. IF CANADA IS REQUIRED, AS A RESULT OF JOINT AND SEVERAL LIABILITY, TO PAY A THIRD PARTY IN RESPECT OF DAMAGES CAUSED BY THE AUTHORIZATION HOLDER, THE AUTHORIZATION HOLDER MUST REIMBURSE CANADA FOR THAT AMOUNT.

10. IF ACTIVITIES AUTHORIZED BY THIS AUTHORIZATION ARE CONDUCTED WHILE ON A DFO VESSEL, THE AUTHORIZATION HOLDER WILL ENSURE THAT PERSONS ENGAGED IN THIS ACTIVITY WEAR APPROPRIATE SAFETY EQUIPMENT DURING THE ENTIRE LENGTH OF THE ACTIVITY. SAFETY EQUIPMENT INCLUDES, BUT MAY NOT BE LIMITED TO, PERSONAL PROTECTION EQUIPMENT THAT MEETS CANADIAN SAFETY STANDARDS.

11. THIS AUTHORIZATION AND CONDITIONS CANCEL AND REPLACE ANY PREVIOUS AUTHORIZATION AND CONDITION ISSUED TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION FOR THE PURPOSE OF CONDUCTING RESPONSE OPERATIONS;

12. THIS AUTHORIZATION IS VALID FROM DATE OF ISSUANCE TO OCTOBER 31, 2018;

13. THE ISSUANCE OF THIS AUTHORIZATION IMPLIES NO COMMITMENT BY THE MINISTER OR THE DEPARTMENT TO REISSUE THE AUTHORIZATION.

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-24-18 10:50 AM
To: Davis, Neil; Thomson, Andrew; Barton, Meagan; Harber, Lee
Subject: FW: [EXTERNAL] RE: Stop All Antibiotic Experiments on J Pod!

Hi All,
I received this email from Dr Raverty this morning on the NOAA fecal testing results. It is pretty technical so not sure what to pull out in a sentence or two. I can check with Dr Raverty on what is relevant in terms of results. J-pod not seen yesterday.
Hope this is useful.
Cheers,
Paul

From: Raverty, Stephen AGRI:EX [mailto:Stephen.Raverty@gov.bc.ca]
Sent: August-24-18 8:17 AM
To: Cottrell, Paul
Subject: FW: [EXTERNAL] RE: Stop All Antibiotic Experiments on J Pod!

From: Nollens, Hendrik [mailto
Sent: Friday, August 24, 2018 8:15 AM
To: Martin Haulena; Raverty, Stephen AGRI:EX; Joseph Karl Gaydos; Kristin Wilkinson - NOAA Federal; Deborah Fauquier; Jim McBain; Teri Rowles; Brad Hanson (NOAA Federal)
Subject: RE: [EXTERNAL] RE: Stop All Antibiotic Experiments on J Pod!

Preliminary results from the J-pod fecal samples we received this week:

Both samples were very diluted and results therefore less reliable than the first sample. Sample B consisted of 2 fractions.

Fecal sample A:
Gram stain:

- No WBCs
- No yeast
- 3+ mixed bacteria, consisting of Gr+ rods with spores, Gr- rods, Gr- coccobacilli, Gr+ cocci

Cytology:

- No WBCs
- No yeast
- 2+ mixed bacteria

Cultures pending

Parasitology (direct and floatation) negative.

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Fecal sample B, fraction #1:
Gram stain:
- No WBCs
- No yeast
- 3+ mixed bacteria, consisting of Gr+ rods with spores, Gr- rods, Gr- coccobacilli, Gr+ cocci

Cytology:
- No WBCs
- No yeast
- 3+ mixed bacteria

Cultures pending

Parasitology (direct and floatation) negative.

Fecal sample #1, fraction A:
Gram stain:
- No WBCs
- No yeast
- 2+ mixed bacteria, consisting of Gr+ rods with spores, Gr- rods, Gr- coccobacilli

Cytology:
- No WBCs
- No yeast
- 1+ mixed bacteria

Cultures pending

Parasitology (direct and floatation) negative.

From: Martin Haulena [mailto:[redacted]
Sent: Monday, August 20, 2018 10:11 AM
To: Nollens, Hendrik
Cc: Raverty, Stephen AGRI:EX; Joseph Karl Gaydos; Kristin Wilkinson - NOAA Federal; Deborah Fauquier; Jim McBain; Teri Rowles
Subject: Re: [EXTERNAL] RE: Stop All Antibiotic Experiments on J Pod!

Thanks Hendrik.

On Aug 20, 2018, at 10:10 AM, Nollens, Hendrik [redacted] wrote:

Hi everyone,

Updated bacterial culture results. We have isolated 5 bacteria and now also 1 fungal isolate.

The bacteria are:

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Photobacterium damsel
E. coli (2 types)
Clostridium sordelii
Clostridium perfringens

The fungal plaque appeared over the weekend. It was subcultured yesterday, so we will be able to do a prep for morphologic ID tomorrow or Wednesday. We will submit a sample for fungal ID via PCR as well.

Thank you,
--Hendrik.

From: Nollens, Hendrik
Sent: Wednesday, August 15, 2018 12:11 PM
To: 'Raverty, Stephen AGRI:EX'; 'Joseph Karl Gaydos'; Kristin Wilkinson - NOAA Federal
Cc: Marty Haulena; Deborah Fauquier; Jim McBain; Teri Rowles
Subject: RE: [EXTERNAL] RE: Stop All Antibiotic Experiments on J Pod!

Preliminary J-pod fecal sample results – SeaWorld San Diego - 8/15/2017

Overall good quality sample

Gram stain:
- 4+ GNR (2 or more morphotypes), at least 1 resembles E.coli
- 1+ GPR with spores
- 2+ yeast
- No WBCs

Cytology:
- 4+ mixed bacteria
- No WBCs

Parasitology:
- Direct: 1+ Contracaecum sp.
- Float: 2+ Contracaecum sp.

Cultures:
- 2 bacterial colony types growing; morphologically not consistent with Salmonella sp.
- Anaerobic culture set up to ID the sporeforming GPR

From: Raverty, Stephen AGRI:EX [mailto:Stephen.Raverty@gov.bc.ca]
Sent: Wednesday, August 15, 2018 11:35 AM
To: 'Joseph Karl Gaydos'; Kristin Wilkinson - NOAA Federal
Cc: Marty Haulena; Nollens, Hendrik; Deborah Fauquier; Jim McBain; Teri Rowles
Subject: [EXTERNAL] RE: Stop All Antibiotic Experiments on J Pod!

Hi,
Information from Simon Jones wrt the parasitology results.

Larval Contracaecum, as is the case with and other anisakid nematodes (i.e., Anisakis, Hysterothylaceum, Pseudoterranova), are found in a wide range of fish host species. The presence of

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Contracaecum spp eggs indicates the presence of mature nematodes in the GI tract, which in turn indicates the whale is (or has been) feeding – but does not help to determine whether the animal has a narrow or broad range of fish species in its diet. I assume DNA testing of the faecal sample has been considered for species ID?

Does the statement "high levels of Contracaecum spp eggs" imply that the level of eggs is greater than one would expect? Egg burden relates to the level of GI infestation which can be a function of feeding success, prey species and the health status of J50 (an immunocompromised host may permit greater infestations).

Thanks for asking my opinion. I wish I could have provided something more substantial.

Best,
Simon

Simon R.M. Jones
Aquatic Animal Health Section
Pacific Biological Station
Fisheries and Oceans Canada
3190 Hammond Bay Road
Nanaimo, British Columbia
V9T 6N7, Canada

From: Joseph Karl Gaydos [mailto:j
Sent: Wednesday, August 15, 2018 10:55 AM
To: Kristin Wilkinson - NOAA Federal
Cc: Raverty, Stephen AGRI:EX; Marty Haulena; Hendrik Nollens; Deborah Fauquier; Jim McBain; Teri Rowles
Subject: Re: Stop All Antibiotic Experiments on J Pod!

Thanks for sharing Kristin. I may not be able to be on the cal today but I would be happy to make a call to Peter Hamilton to address his concerns over the phone.
Thanks,
Joe

On Aug 15, 2018, at 8:51 AM, Kristin Wilkinson - NOAA Federal < wrote:

> Just an FYI on the below email. Lynne did respond but it's good to have on our radar. Should we work on a statement to address " administering antibiotics without a diagnosis" if we move forward with a second dose? Let's discuss on the vet call this morning, thanks! Kristin
>
> ---------- Forwarded message ----------
> From: **Lynne Barre - NOAA Federal** <
> Date: Tue, Aug 14, 2018 at 9:50 PM
> Subject: Fwd: Stop All Antibiotic Experiments on J Pod!
> To: Kristin Wilkinson

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FYI- I asked Peter to send his comments to the KillerWhale.Help@noaa.gov email but wanted to pass them along to you as well. As I responded to Peter I think all of his concerns have been considered but feel free to raise anything with the vets or at least let them know someone had raised concerns about the antibiotics. There was also a question on one of the press calls about administering antibiotics without a diagnosis.
Thanks,
Lynne

---------- Forwarded message ---------
From: **Peter Hamilton** <
Date: Tue, Aug 14, 2018 at 9:33 PM
Subject: Re: Stop All Antibiotic Experiments on J Pod!
To: Lynne Barre - NOAA Federal <
CC: Paul Cottrell <paul.cottrell@dfo-mpo.gc.ca>, Jared Towers

Hi Lynn:
I will be providing further information tomorrow as to why the use of antibiotics must be stopped pending further reviewed.
As previously requested please provide emails that you sent my previous email to:
Hi Lynn:
I have a couple of questions:

1. Is it proposed to put antibiotics in the fish or vitamins or both? As J50 cannot be targeted others would eat the fish. So I would question at least putting antibiotics in the fish. Why not just the fish?
2. Re: The broad based antibiotics: Why were the medical tests not completed to determine the specific cause(s) of J50 health problems to determine the most appropriate antibiotic?

I have taken antibiotics and one had caused me severe side effects such as nausea. Antibiotics could also cause hearing impairment:
There are five main contributing factors to hearing loss in mammals: intense chronic noise, transient intense noise (e.g. explosions), age-related hearing loss (presbycusis), congenital hearing impairment, and ototoxic drug treatment. http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0013824

Thanks to all for helping orcas!

Peter Hamilton

Lifeforce

From: Peter Hamilton <
Sent: August 14, 2018 7:59:05 PM
To: Lynne Barre - NOAA Federal
Subject: Re: Medical Help for J50

s.19(1)

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Hi Lynn:
Please include me on the cc. to whom you passed the issues I raised.
Thanks,
Peter

From: Lynne Barre - NOAA Federal [redacted]
Sent: August 14, 2018 1:36 PM
To: Peter Hamilton
Subject: Re: Medical Help for J50

Hi Peter,
Thanks for sharing your thoughts. I'll pass this along, however, I believe all of the concerns you raised were already considered by the veterinarian team consulting on this case.
Lynne

On Tue, Aug 14, 2018 at 7:41 AM, Peter Hamilton [redacted] wrote:
Hi Lynn:
I have a couple of questions:

1. Is it proposed to put antibiotics in the fish or vitamins or both? As J50 cannot be targeted others would eat the fish. So I would question at least putting antibiotics in the fish. Why not just the fish?
2. Re: The broad based antibiotics: Why were the medical tests not completed to determine the specific cause(s) of J50 health problems to determine the most appropriate antibiotic?

I have taken antibiotics and one had caused me severe side effects such as nausea. Antibiotics could also cause hearing impairment:
There are five main contributing factors to hearing loss in mammals: intense chronic noise, transient intense noise (e.g. explosions), age-related hearing loss (presbycusis), congenital hearing impairment, and ototoxic drug treatment. http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0013824
Thanks to all for helping orcas!

Peter Hamilton

Lifeforce

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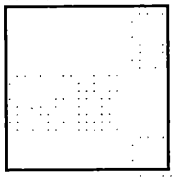
s.19(1)

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell



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We enjoy talking to you – If you do not wish to receive further information from us (where applicable), please email PRIVACY@OCEAN.ORG or write to our policy officer at Ocean Wise Conservation Association, PO Box 3232 Vancouver, BC V6B 3X8
For more information about our privacy or anti-spam policies, please visit www.ocean.org

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-24-18 12:27 PM
To: Thomson, Andrew; Davis, Neil
Cc: Greene, Annely
Subject: Re: Amended NOAA Licence to administer anti-parasitic medication in Canadian Waters

Will do!
Thanks Andy.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Thomson, Andrew
Sent: Friday, August 24, 2018 12:23 PM
To: Cottrell, Paul; Davis, Neil
Cc: Greene, Annely
Subject: Re: Amended NOAA Licence to administer anti-parasitic medication in Canadian Waters

I approve.

Can you arrange transmittal to the applicant.

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

From: Cottrell, Paul
Sent: Friday, August 24, 2018 12:21 PM
To: Thomson, Andrew; Davis, Neil
Cc: Greene, Annely
Subject: RE: Amended NOAA Licence to administer anti-parasitic medication in Canadian Waters

Sorry guys, forgot to mention DFO MM science and Dr Raverty have reviewed application and approved activities.

From: Cottrell, Paul
Sent: August-24-18 12:15 PM
To: Thomson, Andrew; Davis, Neil

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Cc: Greene, Annely
Subject: Amended NOAA Licence to administer anti-parasitic medication in Canadian Waters

Hi Andy & Neil,
Amended letter of authorization attached for review. Only Section I, paragraph numbers 7 and 8 have been amended. The amended letter of authorization allows for anti-parasitic medication treatment and the use of collared darts on J50 in Canadian waters. Dr Teri Roles (NOAA) is the licencee.
Cheers,
Paul

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s.19(1)

Khanna, Sukriti

From: Cottrell, Paul
Sent: August-24-18 12:49 PM
To: 'Teri Rowles - NOAA Federal'; Lynne Barre - NOAA Federal
Cc: Greene, Annely; Sarah Wilkin; Kristin Wilkinson; Thomson, Andrew; Davis, Neil
Subject: RE: SARA license application
Attachments: Amended Authorization Final for J50 NOAA_SECTION_38_AUTHORIZATION_AUG 23 2018 .doc

Hi Teri,
Attached is the approved amended letter of authorization for the collared darting and administering of anti-parasitic medication to J50. Section I, numbers 7 & 8 were added. Thanks for all your efforts to ensure J50 has the best chance possible. Let me know if you have any questions and if you accept the letter of authorization as written.
Best,
Paul

From: Teri Rowles - NOAA Federal [redacted]
Sent: August-22-18 11:00 AM
To: Lynne Barre - NOAA Federal
Cc: Cottrell, Paul; Thornton, Sheila; Greene, Annely; Deborah Fauquier - NOAA Affiliate; Brad Hanson; Sarah Wilkin; Candice Emmons; Kristin Wilkinson
Subject: Re: SARA license application

Paul, Enclosed is the amendment to the SARA license for response to J50. As Kristin discussed with you we have added an anthelminic (anti-parasitic) to the treatment regime based on the fecal sample results identifying *contracaecum* parasites and have added the potential use of a collared needle for the dart. Please let us know if there are any questions.

THANK YOU

On Thu, Aug 9, 2018 at 3:40 PM, Lynne Barre - NOAA Federal [redacted] wrote:
Hi Paul,
Attached is the completed SARA license application form along with the application document submitted yesterday. I've also attached documentation of Animal Care Committee compliance for the activities approved under the US NMFS Permit No. 18786-03.

I believe that Brad Hanson has already applied for foreign vessel clearance, but am awaiting confirmation. I can send along a photo of the vessel as soon as I get one from the team.

Please let us know if you need anything else and please provide confirmation that work can proceed in Canadian waters or a copy of the license or as soon as it is available.
Thanks,
Lynne

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039, NE PACIFIC SOUTHERN RESIDENT KILLER WHALE J50- AMENDMENT

AUTHORIZATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL

PURSUANT TO SECTION 38 OF THE *MARINE MAMMAL REGULATIONS*, SECTION 52 OF THE *FISHERY (GENERAL) REGULATIONS*, AND SECTION 74 OF THE *SPECIES AT RISK ACT*, THIS AUTHORIZATION IS HEREBY GIVEN TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL. THE AUTHORIZATION IS VALID ANYWHERE IN CANADIAN FISHERIES WATERS IN THE PACIFIC OCEAN WHERE FISHERIES AND OCEANS CANADA (DFO) ADMINISTERS THE AQUATIC RESOURCES AND OCEAN SPACE.

THE AUTHORIZATION IS VALID ONLY IN ACCORDANCE WITH THE FOLLOWING CONDITIONS SPECIFIED PURSUANT TO SUBSECTION 38(2) OF THE *MARINE MAMMAL REGULATIONS*:

1. THE OPERATIONS AUTHORIZED UNDER THIS AUTHORIZATION WILL INCLUDE THE FOLLOWING:

I) INTERACTING WITH A MARINE MAMMAL INCLUDING KILLER WHALES FOR THE PURPOSES OF;

1. RESPIRATORY SAMPLES WILL BE COLLECTED VIA PETRI DISHES MOUNTED ON THE END OF A CARBON FIBER POLE HELD JUST OVER THE BLOWHOLE. THE VESSEL CLOSELY APPROACHES THE WHALE TO WITHIN THE REACH OF THE POLE (5 METERS OR LESS), PERPENDICULAR TO THE WHALE, AND THE POLE IS LOWERED OVER THE BLOWHOLE TO CATCH THE EXPIRED AIR. RESPIRATORY SAMPLES TAKEN WILL BE ANALYZED FOR POTENTIAL PATHOGENS AND OTHER HEALTH INDICATORS USING CYTOLOGY, CULTURE AND MOLECULAR METHODS.

2. FECAL SAMPLES WILL BE COLLECTED OPPORTUNISTICALLY WHENEVER POSSIBLE WHEN VISUALLY DETECTED FLOATING ON THE WATER. FECAL SAMPLES COLLECTED THIS WAY CAN YIELD ANAYLSES OF NUTRITION, HORMONES (E.G., STRESS, REPRODUCTIVE), TOXINS, AND DNA (TO IDENTIFY SUBJECT WHALE AND PREY SPECIES). SMALL FECAL SAMPLES WILL BE COLLECTED ON STERILE GAUZE SEALED IN ZIP LOCKS AND PLACED IMMEDIATELY IN COOL STORAGE. LARGER FECAL SAMPLES WILL BE COLLECTED IN TUBES AND IMMEDIATELY PLACED IN A COOLER.
   NOTE: WHILE ALL EFFORTS WILL BE MADE TO COLLECT FECES FROM J-50, IDENTIFICATION OF WHICH ANIMAL DEFECATED IS NOT ALWAYS IMMEDIATELY POSSIBLE IN THE FIELD, AND ANY AVAILABLE SAMPLE WILL BE COLLECTED.

3. MUCUS SAMPLES WILL BE COLLECTED OPPORTUNISTICALLY WHENEVER POSSIBLE WHEN VISUALLY DETECTED FLOATING ON THE WATER. MUCUS SAMPLES CAN YIELD ANALYSES OF HORMONES AND PATHOGENS, AMONG OTHERS. MUCUS SAMPLES WILL BE COLLECTED ON STERILE GAUZE AND PLACED IN COLD STORAGE.
   NOTE: WHILE ALL EFFORTS WILL BE MADE TO COLLECT MUCUS FROM J-50, IDENTIFICATION OF WHICH ANIMAL THE MUCUS IS FROM MAY NOT ALWAYS BE IMMEDIATELY POSSIBLE IN THE FIELD, AND ANY AVAILABLE SAMPLE WILL BE COLLECTED.

4. IF SKIN DISCOLORATIONS OR ABNORMALITIES ARE OBSERVED (AS HAS BEEN PREVIOUSLY NOTED CAUDAL TO THE BLOWHOLE AND ON THE FLUKES), SKIN SAMPLES WILL BE OBTAINED THROUGH A ROUGHENED COLLECTOR (DISH SCRUBBIE OR SIMILAR) ON THE END OF A 5 M POLE. THE VESSEL CLOSELY APPROACHES THE WHALE TO WITHIN THE REACH OF THE POLE (5 METERS OR LESS), PERPENDICULAR TO THE WHALE, AND THE POLE IS LOWERED INTO CONTACT WITH

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THE DISCOLORED SKIN. SKIN SCRAPE SAMPLES WILL BE ANALYZED TO IDENTIFY POTENTIAL PATHOGENS.

5. VETERINARY HEALTH ASSESSMENT IS CONDUCTED VISUALLY BY A VETERINARIAN, WITH PHOTO AND VIDEO DOCUMENTATION. THIS ASSESSMENT WILL LIKELY BE CONDUCTED SIMULTANEOUSLY WITH THE CLOSE APPROACHES TO COLLECT THE SAMPLES LISTED ABOVE, AND WOULD LIKELY NOT REQUIRE ADDITIONAL APPROACHES. HEALTH ASSESSMENT WILL INCLUDE OBSERVATIONS OF BODY CONDITION AND BEHAVIOR, FROM VARIOUS MARINE VESSELS, DRONE OBSERVATIONS, AND FROM SHORE (WHEN POSSIBLE). PHOTOS (HIGH RESOLUTION) AND VIDEO (1080P AND GREATER RESOLUTION) WILL BE COLLECTED FROM ALL PLATFORMS UTILIZED, AND IMAGES WILL BE USED FOR COMPARISONS AND ONGOING ASSESSMENT. BEHAVIORAL PATTERNS WILL BE MONITORED AS OFTEN AS POSSIBLE THROUGHOUT THE RESPONSE. BEHAVIORAL ETHOGRAMS MAY BE DEVELOPED FOR THIS PURPOSE WITH A DEDICATED OBSERVER COLLECTING THIS DATA FOR FUTURE ANALYSIS. PARAMETERS THAT WILL BE MONITORED AND RECORDED INCLUDE:
   - RESPIRATORY RATE (# RESPIRATIONS/5 MINUTES)
   - BLOW ODOR
   - DEFECATION FREQUENCY
   - POSITION AND DISTANCE RELATIVE TO J16 (OR OTHER CLOSELY ASSOCIATED POD MEMBERS)
   - FORAGING ACTIVITY; % TIME SPENT LOGGING

6. INITIAL MEDICAL TREATMENT VIA DELIVERY OF ANTIBIOTICS BY INJECTION, EITHER VIA POLE SYRINGE OR REMOTE DELIVERY DART SYSTEM. INJECTIONS WILL BE ADMINISTERED INTO THE EPAXIAL OR OTHER LARGE MUSCLE MASS. NEEDLE LENGTH WILL BE APPROXIMATELY 2". ALL INJECTIONS WILL BE SUPERVISED BY A VETERINARIAN.

   MEDICATIONS LIST IN ORDER OF PRIORITY (AS ADVISED BY VETERINARY TEAM). THE ANTIBIOTICS ON THIS LIST ARE INTENDED TO ADDRESS THE RANGE OF BACTERIAL INFECTIONS J50 IS SUSCEPTIBLE TO.
   - 2000-3000MG CONVENIA, SQ OR IM ONCE (600KG X 5 MG/KG) - ONE DOSE WOULD PROVIDE 7-14 DAYS EFFICACY; OR
   - 2000-3000 MG EXCEDE SQ OR IM ONCE (600KG X 5 MG/KG) - ONE DOSE WOULD PROVIDE 5-10 DAYS EFFICACY

   *ANTIBIOTIC DRUG CHOICE MAY CHANGE BASED ON DIAGNOSTIC FINDINGS. ANY NEW DRUG CHOICES & DOSAGES WILL BE PROVIDED TO DFO AS NEEDED PRIOR TO USE.

7. PROVIDING ANTI-PARASITIC TREATMENT FROM THE NWFSC OR SEADOC BOAT VIA POLE SYRINGE OR REMOTE DELIVERY. ADDITIONAL MEDICATIONS MAY BE DEEMED NECESSARY IN HER TREATMENT AND THOSE WILL BE DISCUSSED IN ADVANCE OF ANY DEVIATION FROM THOSE INDICATED. INJECTIONS WILL BE ADMINISTERED INTO THE EPAXIAL MUSCLE GROUP OR THE SUBCUTANEOUS TISSUE IN THE SAME AREA. NEEDLE WILL BE APPROXIMATELY 2" AND 40MM. ALL INJECTIONS WILL BE SUPERVISED OR ADMINISTERED BY AN EXPERIENCED VETERINARIAN. THE ANTI-PARASITIC TREATMENT IS INTENDED TO ADDRESS A PARASITE INFECTION INDICATED THROUGH EXAMINATION OF A FECAL SAMPLE COLLECTED IN HER VICINITY.
   - 1 10 MILLIMETER IVERMECTIN THROUGH 10ML DART - ONE TIME DOSAGE (0.2 MG/KG)
   - LITTLE TO NO RISK TO J50, IVERMECTIN HAS BEEN GIVEN TO OTHER MARINE MAMMALS WITHOUT ANY ADVERSE EFFECTS, HOWEVER INJECTIONS OF 10 ML MAY RESULT IN LOCALIZED INFLAMMATION OR SWELLING.

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8. USE OF COLLARED NEEDLES IF THE UNCOLLARED NEEDLE ON THE DART THAT IS NORMALLY USED BOUNCES OFF WITHOUT FULL DELIVERY OF ANTIBIOTICS AND THE PARASITE TREATMENT, THEN THE VETERINARIANS MAY SWITCH TO A COLLARED NEEDLE WITH A RIDGE THAT HOLDS IT IN PLACE LONGER TO DELIVER THE FULL DOSE. THIS WILL DECREASE THE NUMBER OF APPROACHES/DARTS NEEDED AND INCREASE THE PROBABILITY OF DELIVERING THE FULL DOSE IN ONE SHOT. THIS TYPE OF DART IS COMMONLY USED TO REMOTELY DART WILDLIFE SUCH AS ELEPHANTS AND IS DESIGNED TO FALL OUT AND BE RECOVERED WHEN THE ANIMAL IS HANDLED. THE TEAM OF VETERINARIANS HAS WEIGHED THE OPTIONS AND CONCLUDED THAT THE EXPECTED BENEFITS FROM RECEIVING THE MEDICATIONS AT THIS CRITICAL TIME ARE SUBSTANTIAL, AND THE DART IS LIKELY TO COME OUT IN HOURS TO LESS THAN A DAY. THE DART POSSIBLY REMAINING IN THE ANIMAL FOR A PERIOD OF TIME MAY CAUSE INFLAMMATION AND SWELLING OF THE AREA.

II) APPROACHING A KILLER WHALE WITH A VEHICLE WITHIN A DISTANCE OF LESS THAN 200 METRE DISTANCE;

III) DOCUMENTATION AND PHOTOGRAPHY OF MARINE MAMMALS;

IV) THE COLLECTION OF ANY BIOLOGICAL SAMPLES REQUESTED FROM FISHERIES AND OCEANS CANADA.

1. COLLECTION OF BREATH/BLOW SAMPLE

2. COLLECTION OF FECAL SAMPLE

3. COLLECTION OF OTHER SAMPLES OPPORTUNISTICALLY AVAILABLE (E.G., MUCUS AND SKIN)

4. IF SKIN DISCOLORATION IS NOTED, COLLECTION OF SKIN SCRAPINGS FROM DISCOLORED AREA

5. COMPLETION OF A VISUAL VETERINARY HEALTH ASSESSMENT AND PHOTO/VIDEO DOCUMENTATION

6. PROVIDING ANTIBIOTIC TREATMENT FROM THE NWFSC BOAT VIA POLE SYRINGE OR REMOTE DELIVERY.

ALL SAMPLES WILL BE COLLECTED BY A RESPONSE TEAM ON A SINGLE BOAT (A NOAA VESSEL). THE COMPOSITION OF THE TEAM WILL VARY DEPENDING UPON THE DAY, BUT A COMPLETE LIST OF POTENTIAL PERSONNEL IS LISTED.

2. THE AUTHORIZED PERSONNEL FOR THE ABOVE OPERATIONS SHALL BE AS FOLLOWS:

LEAD DR. TERRI ROWLES, THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

RESPONSE TEAM MEMBERS

DR. JOE GAYDOS (SEADOC) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

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DR. JIM MCBAIN (SEA WORLD) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. HENDRIK NOLLENS (SEA WORLD) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. MARTIN HAULENA (VANCOUVER AQUARIUM) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. BRAD HANSON (NOAA) SAMPLE COLLECTION AND VESSEL DRIVER

CANDICE EMMONS (NOAA) SAMPLE COLLECTION AND VESSEL DRIVER

JEFF FOSTER (WHALE SANCTUARY PROJECT) SAMPLE COLLECTION AND VESSEL DRIVER

KATY FOSTER (WHALE SANCTUARY PROJECT) SAMPLE COLLECTION AND VESSEL DRIVER

TREVOR FOSTER (RESEARCH TECH) SAMPLE COLLECTION AND VESSEL DRIVER

*A STAFF MEMBER WILL BE IDENTIFIED FOR PHOTO AND/OR VIDEO DOCUMENTATION.

ACTIVITIES CARRIED OUT UNDER THE AUTHORITY OF THIS AUTHORIZATION SHALL ONLY BE CONDUCTED UNDER THE DIRECT SUPERVISION OF THE AUTHORIZATION HOLDER OR AUTHORIZED INDIVIDUALS AS LISTED ABOVE. THE AUTHORIZATION HOLDER IS RESPONSIBLE TO ENSURE THAT AN AUTHORIZED INDIVIDUAL IS PRESENT DURING ANY ACTIVITY AUTHORIZED UNDER THIS AUTHORIZATION.

3. THE RESPONSE ACTIVITY SHALL TAKE PLACE IN THE WATERS OF THE PACIFIC REGION THAT ARE PARTS OF AREAS UNDER THE ADMINISTRATION OF DFO;

4. THE FOLLOWING DFO REGIONAL STAFF SHALL BE ADVISED IMMEDIATELY ON COMMENCEMENT OF ANY OPERATIONS: PACIFIC REGION: PAUL COTTRELL (604) 240-3841

5. AN INCIDENT REPORT SHALL BE MADE DETAILING SPECIES IDENTIFICATION, EFFORTS MADE TO SAVE THE ANIMAL, CONDITION OF THE ANIMAL AT THE COMMENCMENT AND AT THE END OF THE OPERATON, LOCATION (COORDINATES) OF THE OPERATION, NAMES OF ALL INVOLVED IN THE OPERATION, ANY OTHER OBSERVATIONS RELEVANT TO INCIDENT;

6. A QUARTERLEY REPORT INCLUDING LOCATIONS, SPECIES, NUMBERS AND OBSERVATIONS SHALL BE PROVIDED TO DFO PACIFIC REGION REGIONAL COORDINATOR:
PAUL COTTRELL, PAUL.COTTRELL@DFO-MPO.GC.CA

7. THAT A COPY OF THIS AUTHORIZATION SHALL BE CARRIED BY ALL PERSONNEL ENGAGED IN THE RESPONSE OPERATIONS. GOVERNMENT ISSUED IDENTIFICATION DOCUMENTS ARE REQUIRED FOR ANYONE ACTING UNDER THE AUTHORITY OF THIS AUTHORIZATION. THE AUTHORIZATION AND ANY PERSON WORKING UNDER ITS AUTHORITY MUST BE AVAILABLE FOR INSPECTION UPON REQUEST BY A FISHERY OFFICER OR FISHERY GUARDIAN;

8. THE AUTHORIZATION HOLDER MUST HAVE APPROPRIATE, CURRENT LIABILITY INSURANCE AND/OR APPROPRIATE, CURRENT WORKERS COMPENSATION COVERAGE IN PLACE THAT COVERS ACTIVITIES UNDERTAKEN IN ALL PROVINCES COVERED BY THIS AUTHORIZATION THROUGHOUT THE DURATION OF THE CONTRACT. COPIES OF THIS DOCUMENTATION MUST BE PROVIDED TO THE DFO IN ADVANCE OF COMMENCEMENT OF THE AUTHORIZED ACTIVITIES.

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9. THE AUTHORIZATION HOLDER AGREES THAT IT IS FULLY LIABLE FOR ANY DAMAGES THAT IT CAUSES TO ANY THIRD PARTY IN CONNECTION WITH ACTIVITIES AUTHORIZED BY THE AUTHORIZATION, REGARDLESS OF WHETHER THE THIRD PARTY MAKES ITS CLAIM AGAINST CANADA OR THE AUTHORIZATION HOLDER. IF CANADA IS REQUIRED, AS A RESULT OF JOINT AND SEVERAL LIABILITY, TO PAY A THIRD PARTY IN RESPECT OF DAMAGES CAUSED BY THE AUTHORIZATION HOLDER, THE AUTHORIZATION HOLDER MUST REIMBURSE CANADA FOR THAT AMOUNT.

10. IF ACTIVITIES AUTHORIZED BY THIS AUTHORIZATION ARE CONDUCTED WHILE ON A DFO VESSEL, THE AUTHORIZATION HOLDER WILL ENSURE THAT PERSONS ENGAGED IN THIS ACTIVITY WEAR APPROPRIATE SAFETY EQUIPMENT DURING THE ENTIRE LENGTH OF THE ACTIVITY. SAFETY EQUIPMENT INCLUDES, BUT MAY NOT BE LIMITED TO, PERSONAL PROTECTION EQUIPMENT THAT MEETS CANADIAN SAFETY STANDARDS.

11. THIS AUTHORIZATION AND CONDITIONS CANCEL AND REPLACE ANY PREVIOUS AUTHORIZATION AND CONDITION ISSUED TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION FOR THE PURPOSE OF CONDUCTING RESPONSE OPERATIONS;

12. THIS AUTHORIZATION IS VALID FROM DATE OF ISSUANCE TO OCTOBER 31, 2018;

13. THE ISSUANCE OF THIS AUTHORIZATION IMPLIES NO COMMITMENT BY THE MINISTER OR THE DEPARTMENT TO REISSUE THE AUTHORIZATION.

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s.21(1)(a) s.69(1)(g) re: (a)

s.21(1)(b) s.69(1)(g) re: (e)

Khanna, Sukriti

From: Davis, Neil
Sent: August-24-18 2:15 PM
To: Scott, Paul G; Harber, Lee
Cc: Moore, Kendra; Brekke, Heather
Subject: RE: SRKW -

Hi Paul,

I've asked Heather Brekke, our SARA Marine Team Lead to coordinate a working group She'll be including you on that group and sending out info shortly for a mtg to continue the discussion at the beginning of next week.

Thx
Neil

From: Scott, Paul G
Sent: Friday, August 24, 2018 2:00 PM
To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Cc: Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>
Subject: SRKW -

Afternoon all,

I wonder if the four of us have a call to discuss next steps on this matter? Right now on Monday, any time after 2pm Eastern works for me. Is there any time in there that might work for you folks?

Have a good weekend

Paul

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Webb, Cheryl
Sent: August-24-18 5:17 PM
To: Reid, Rebecca
Cc: Thomson, Andrew; Davis, Neil; Stewart, Julie
Subject: EcoJustice Letter - Developing a Response to the August 20 correspondence

Importance: High

Rebecca, I don't know if the latest EcoJustice letter has made its way to you yet (attached),

[redacted]

Cheryl

Cheryl Webb
Regional Director
Ecosystems Management Branch
Fisheries and Oceans Canada / Government of Canada
cheryl.webb@dfo-mpo.gc.ca / Tel: 604-666-6532
Directrice régionale
Direction des écosystèmes
Pêches et Océans Canada / Gouvernement du Canada
cheryl.webb@dfo-mpo.gc.ca / Tél: 604-666-6532

s.69(1)(g) re: (a)
s.69(1)(g) re: (e)
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Davis, Neil

From: Girouard, Louise
Sent: Friday, August 24, 2018 3:35 PM
To: Davis, Neil; Nener, Jennifer; Doucette, Claire
Cc: Carlson, Mike; Brekke, Heather
Subject: RE: SRKW [redacted]

Hi Neil,

Apologies Janine Malikian will be there for communications.

L

From: Davis, Neil
Sent: Friday, August 24, 2018 2:39 PM
To: Nener, Jennifer <Jennifer.Nener@dfo-mpo.gc.ca>; Doucette, Claire <Claire.Doucette@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
Cc: Carlson, Mike <Mike.Carlson@dfo-mpo.gc.ca>; Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>
Subject: RE: SRKW [redacted]

Hi folks,

I don't believe we've heard from your groups about a rep to contribute to the work below (Claire, I understood Gen Cauffope might participate, but she is away next week – we will need someone who is available next week). When you identify someone, please respond to Heather, cc'd here, who is coordinating, as I'll be away next week

Thx
Neil

From: Davis, Neil
Sent: Wednesday, August 22, 2018 12:52 PM
To: Nener, Jennifer (Jennifer.Nener@dfo-mpo.gc.ca) <Jennifer.Nener@dfo-mpo.gc.ca>; Doucette, Claire <Claire.Doucette@dfo-mpo.gc.ca>; Girouard, Louise <Louise.Girouard@dfo-mpo.gc.ca>
Cc: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Carlson, Mike <Mike.Carlson@dfo-mpo.gc.ca>; Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>
Subject: SRKW [redacted]

Hi all,

NHQ SARA is leading the development of [redacted]

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We're looking for a participant from the Salmon team, C&P, and Comms to join participants from EMB, SARA, Fish Mgmt, and Science on this Working Group. I've asked Heather Brekke, the SARA Marine Team Lead to coordinate the working group, so she will be following up w the participants you identify to get this work underway as soon as possible. I expect we'll seek a few participants from NHQ as well.

Timelines are not totally clear yet, but it appears we have until around the end of the month to at least complete a first draft of this work.

Neil

Neil Davis
Director, Resource Management
Fisheries and Oceans Canada | Government of Canada
Neil.Davis@dfo-mpo.gc.ca | Tel: (604) 666-0115

Directeur, Gestion des Ressources
Pêches et Océans Canada | Gouvernement of Canada
Neil.Davis@dfo-mpo.gc.ca | Tel: (604) 666-0115

s.16(2)

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Dozie, Juachi

From: Harber, Lee
Sent: August-24-18 11:45 AM
To: Davis, Neil
Subject: FW: SRKW IMAG - Nov. 1 Mtg

FYI – keeping Jennifer's team up to speed, as the meeting will have a prey availability focus.

Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: (

From: Harber, Lee
Sent: 2018–August-24 11:44 AM
To: Nener, Jennifer
Cc: Grout, Jeff; Dobko, Ashley
Subject: SRKW IMAG - Nov. 1 Mtg

Hi Jennifer,

I just wanted to give you an update on how things are shaping up for the upcoming SRKW IMAG meeting on November 1st (3 hours).

The format and presentation topics are beginning to take shape. Below is the meeting format and presentation topics that has been agreed upon by the IMAG secretariat group (i.e. DFO, ECCC, TC).

I could potentially see the Salmon Team contributing to the updates part of the meeting, e.g. update on the fishery closures. There may also be room in Part II as well, we just need to be mindful on how the group will receive certain topics.

Please let me know if you have any thoughts and I will continue to keep you and your team informed.

==========

Meeting Format:

I. Standing item 1: Roundtable update on actions underway & recent developments
II. In Focus: key threat Prey Availability
III. Standing item 2: Opportunities for collaboration
IV. Roundtable

PART II: Presentation Topics:

1. Role of hatcheries to increase prey availability (SEP)
2. Hydrophone Network and Data Collection Results (Science)
3. Aerial Surveillance Program: SRKW Monitoring (C&P)

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Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

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Khanna, Sukriti

From: MacDougall, Lesley
Sent: August-24-18 2:44 PM
To: Brekke, Heather; Cottrell, Paul; Grout, Jeff; Jackson, Corey; Johansen, Jeff; Keizer, Adam; Lamont, Averil; Mar, Amy; Leslie, Karen; Nantel, Martin; Fershau, Jonathan; Grant, Paul; Payne, Brigid; Hillier, Joy; Oldford, Greig; Nutton, Byron; Ladwig, Aleria; Mahoney, Jason; Willis, David (Pacific); Cheung, Alice; Davis, Neil; Galbraith, Ryan; Whitehouse, Timber; Luedke, Wilf; Millar, Nathan; Holmes, John; Kennedy, Eddy; Whelan, Christie; Higgins, Mark; Chamberlain, Jon; Spence, Brenda; Kanno, Roger; Paylor, Adrienne; Jepps, Shelley; Ridings, Pauline; Rogers, Juanita; Wylie, Erin; Grant, Paul; Webb, Allison
Cc: Brown, Laura (Pacific); Masson, Colin; Gotch, Steve; Bate, Angela; Thomson, Andrew; Webb, Cheryl; Smith, Ken; Lowe, Carmel; Nener, Jennifer
Subject: CSAP requests for science advice Callout 2018: heads up and mid-year review
Attachments: 2018-19_MidYear_update_achievables.pdf; 2018-19_MidYear_update_uncertains.pdf; 2018-19Mid_year_review.xlsx; 2018-19_MidYear_update_schedule.pdf

Client & Science Managers (please share in your group if I've missed managers)

RSIA Callout warning:
This is an early warning for the RSIA callout, which will follow in about 2 weeks. 2018 Requests for Science advice, signed off by your Regional Director, will be due **October 31st 2018.**

To position you for this year's RSIA callout, a mid-year review RSIA spreadsheet is also on the regional drive under the folder "CSAP" with the following updates from callout2017:

- 2017-18 status has been updated
- Not achievable RSIAs have been deleted
- Withdrawn RSIAs have been deleted

I have updated the folders on the regional drive under the folder "CSAP" for you to place your NEW 2018 RSIAs. Since we are now into multiyear planning processes, I have imported the previous RSIA's (callout and in-year) as well. You won't need to re-submit previous RISAs, but you will need to confirm the previous RSIA is still needed, and where it belongs in the priority list.

Science Managers: you too can submit RSIAs. This is applicable for models, frameworks or methods that are developed to provide advice to clients. I also ask you to review your B-Base funded programs (SPERA, ACASP, IGS, PARR, etc).

Detailed instructions to prepare this year's RSIA submission will be sent in the official callout, in about 2 weeks.

Mid-year update:
The following documents are attached (and are available on the regional drive under the folder "CSAP"):
These documents identify what we communicated to RMC last year, and what is the status.

- Summary of progress on proposed schedule (approved by RMC); summary of products to-date; including additional unexpected requests (2018-19 MidYear update schedule.pdf)
- Update for requests identified as achievable (2018-19 MidYear update achievables.pdf)
- Update for requests identified as uncertain (2018-19 Midyear update uncertains.pdf)

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If you would like me to talk directly to your group about science requests, planning, the Canadian Science Advisory Secretariat and peer review processes, RSIA reviews etc. please contact me.

Thank you,
Lesley

Lesley MacDougall BSc, MMM, RPBio

Science Coordinator | Gestionnaire scientifiques

Centre for Science Advice | Centre des avis scientifiques
Pacific Region | Région du Pacifique
Pacific Biological Station | Station biologique du pacifique
Nanaimo, B.C. V9T 6N7 | Nanaimo (CB) V9T 6N7

PHONE #: 250-756-7088
lesley.macdougall@dfo-mpo.gc.ca

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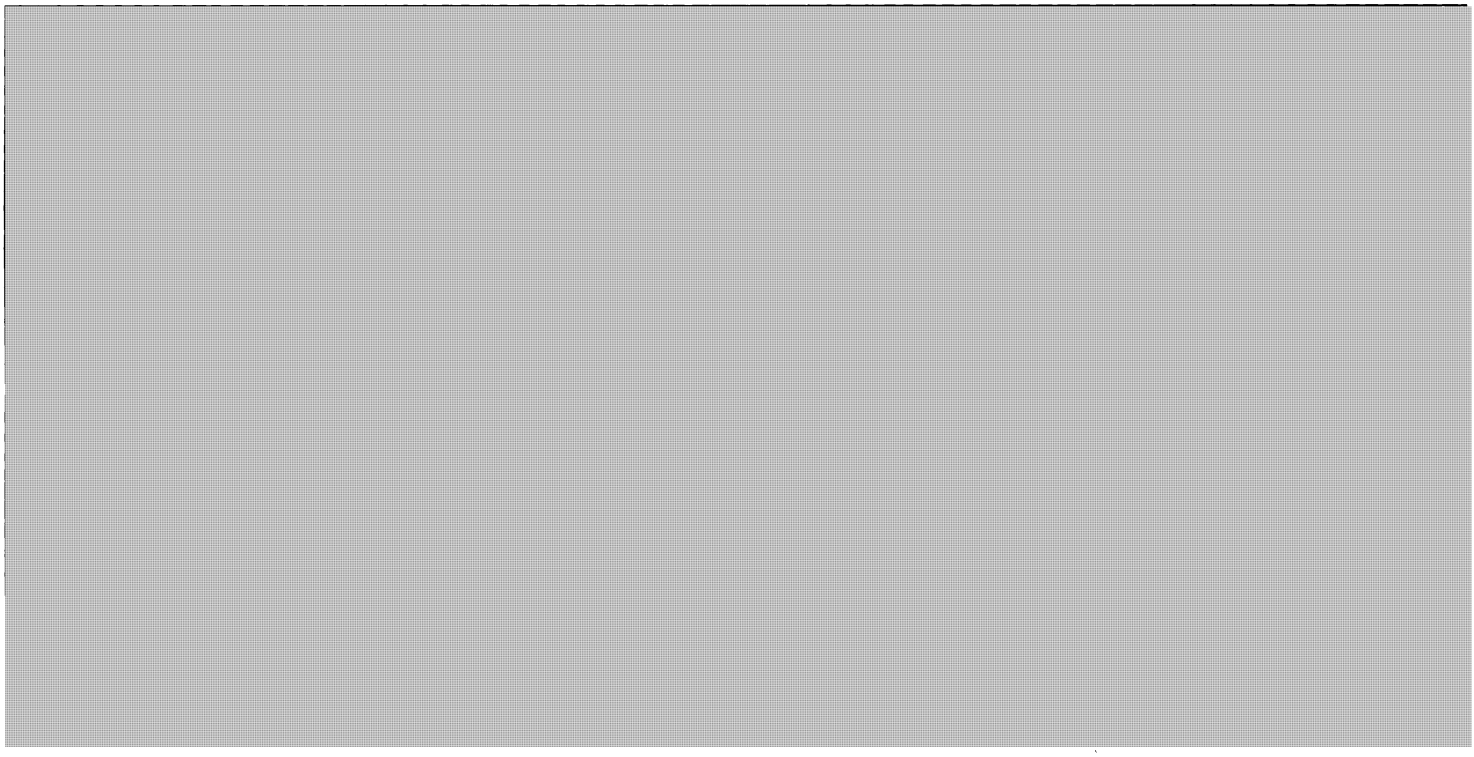

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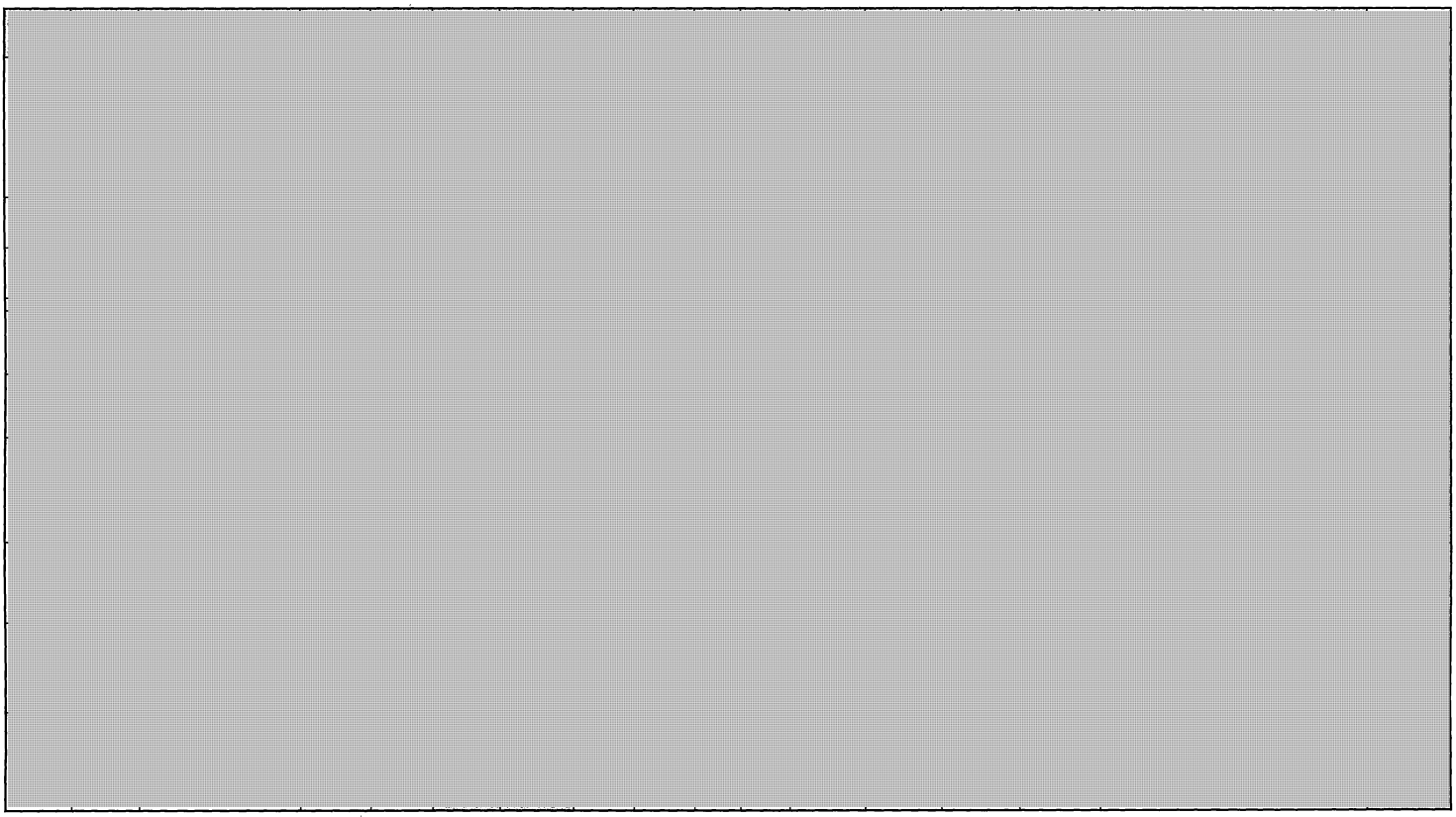

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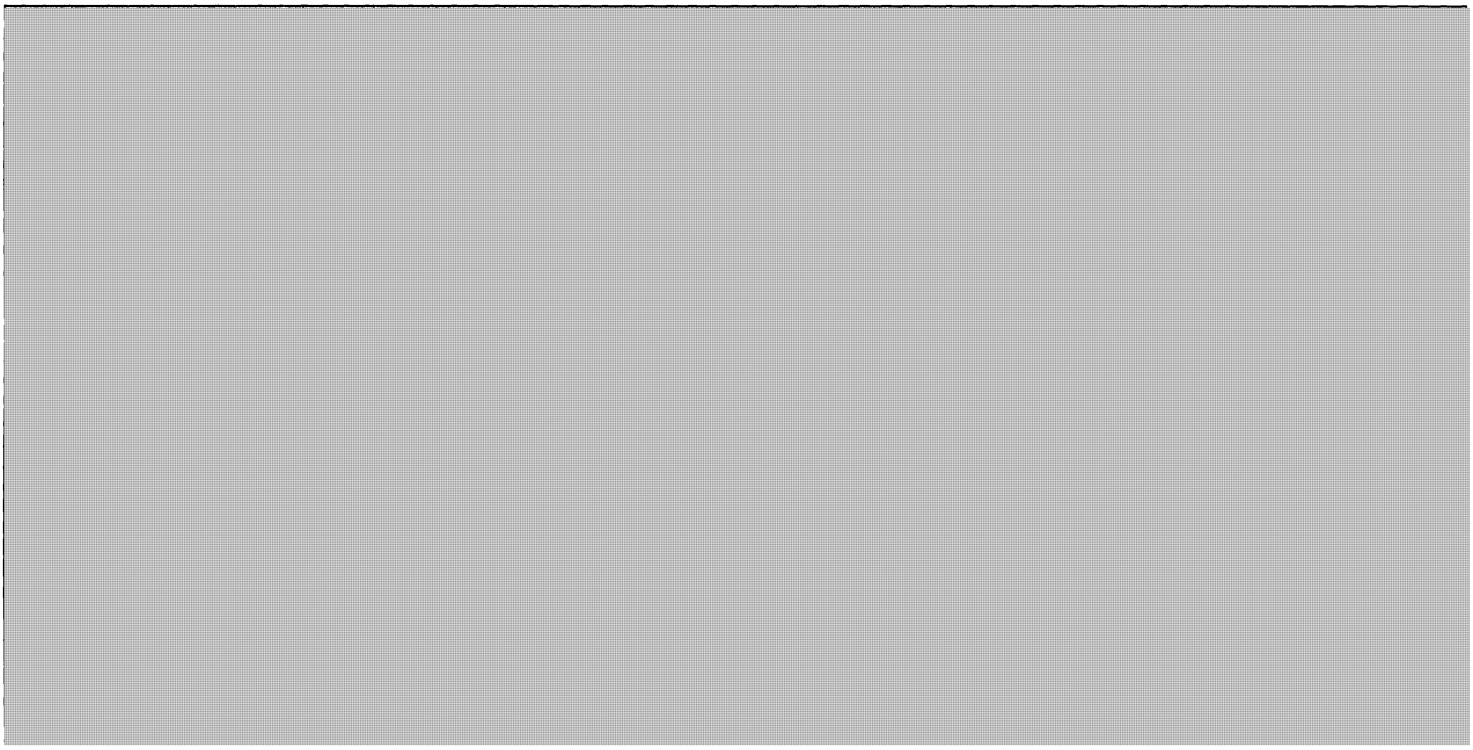

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CSAS 2017 Requests for Science Advice
RMC Review - February 13, 2018

TAB 3 - Requests from all years - Deferred

CSAP FileCode	Sector/ Program	Title of Request for advice or Information	DFO Client Sector	Client Priority	Original achievability	updated achievability	Updated Delivery Year	Planned or Potential Delivery Date	Process	Science Division	Section Head	Lead	Team	Updated 2016-17 Status	Planning & Status Comment	RMC 2018 commitment
2017SAR01	SARA	Cumulative Effects Assessment for Resident Killer Whale Populations	Fish Mgmt	1		Achievable	2018-19	01-Mar-19	RPR	OSD	Ross, A	Clark - Murray	Locke, Hannah	Planning Underway	work is underway Conceptual FW to be peer reviewed	Achievable

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RMC Review - February 13, 2018

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CSAS 2017 Requests for Science Advice
RMC Review - February 13, 2018

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s.21(1)(a)

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CSAS 2017 Requests for Science Advice
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RMC Review - February 13, 2018

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s.21(1)(a)

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CSAS 2017 Requests for Science Advice
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CSAS 2017 Requests for Science Advice
RMC Review - February 13, 2018

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RMC Review - February 13, 2018

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2015SAR07	SARA	Oct2017UPDATE Possible fisheries management options and efficacy towards increasing prey availability to support recovery of Resident Killer Whales	Fish Mgmt	1	Uncertain	Uncertain			RPR	ESD/StAR	Thiess, M			0	Jan 2018 - prey workshop was held in November, some discussion of possible fish management options timing and areas of hatchery or fisheries management questions - where would they be most effective **NOAA will be holding complementary workshop in spring - CSAS deliverable still unclear**	Uncertain

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CSAS 2017 Requests for Science Advice
RMC Review - February 13, 2018

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Progress on proposed schedule

- RPR – Regional Peer Review
- SR – Science Response
- NPR – National Peer Review
- NMMPRC – National Marine Mammal Peer Review Committee

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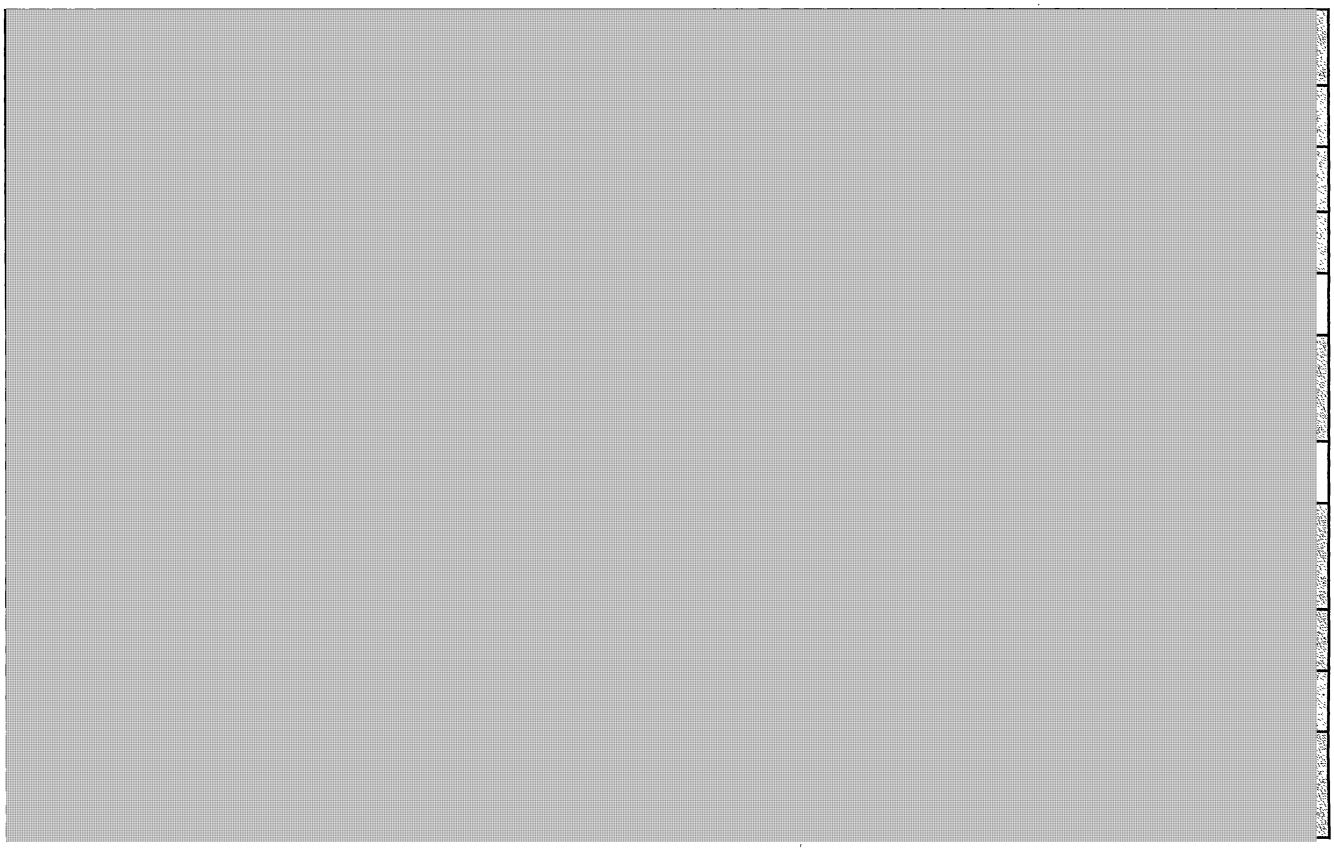
2018-19: Proposed Schedule Q1+Q2



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2018-19: Proposed Schedule Q3+Q4

2017SAR01: Cumulative Effects Assessment for Resident Killer Whale populations RPR	March 2018

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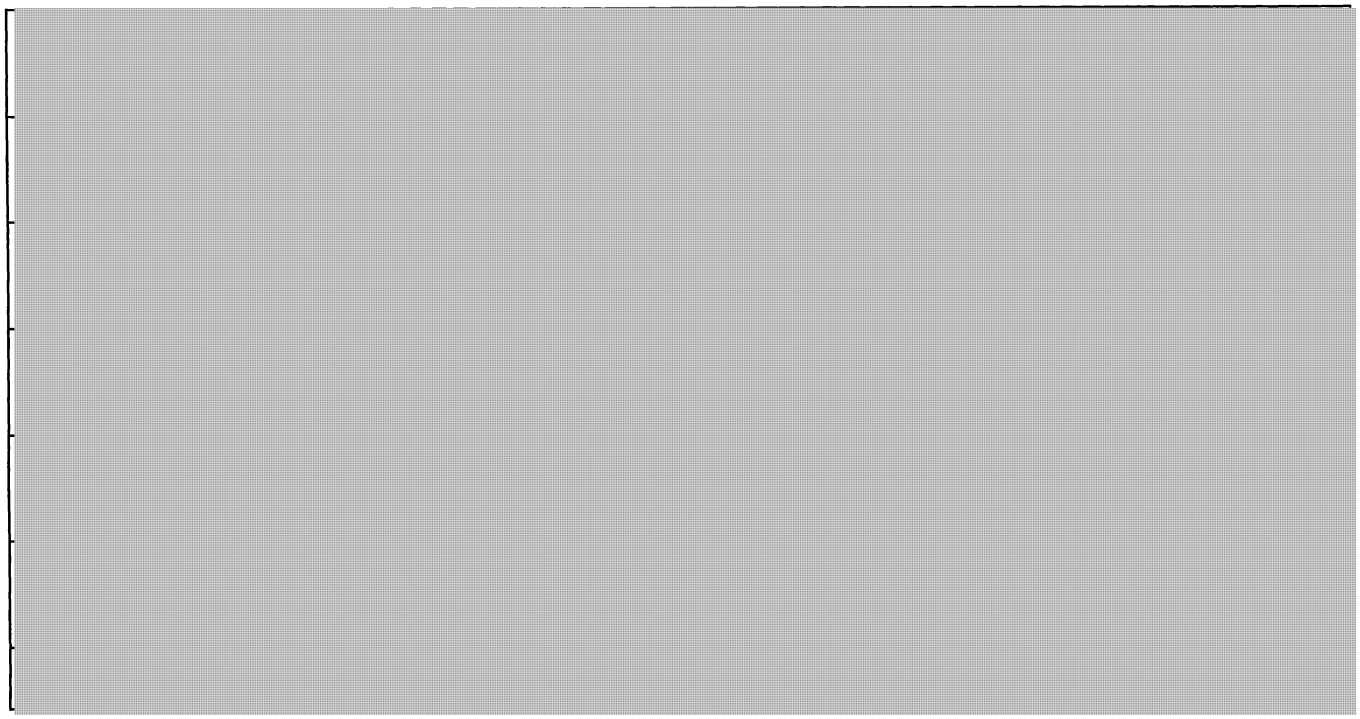
s.21(1)(b)

Added processes we didn't expect:



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CSAP Summary of Outputs – to Aug 2018

Year	Processes			Documents Published					RSR**
	RPRs	SRP	Total	Res Docs	Proc	SARs	SRs	Doc Total	
2018	2	9	11	6	1	8	11	26	12
2017	12	10	22	11	2	12	6	31	8
2016	10	13	23	6	5	19	21	51	14
2015	15	9	24	18	28	24	15	85	9
2014	17	4	21	9	4	10	8	31	1
2013	17	6	23	13	8	12	18	51	
2012	18	7	25	19	9	15	19	62	
2011	17	-	17	26	18	24	-	68	
2010	17	-	17	17	3	17	-	37	

s.16(2)

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Khanna, Sukriti

From: Harber, Lee
Sent: August-24-18 9:22 AM
To: Thomson, Andrew
Cc: Davis, Neil
Subject: FW: Indigenous and Multi-Stakholder Advisory Group - Terms of Reference
Attachments: 2018-08-24SRKWIndigenousMultistakeholderAdvisoryGroupDRAFTTORFINAL Sent to Participants(SFC comments).docx

Hi Andy,

Some comments from shipping federation came in this morning. Please see attached. A few notables:

- They feel 4 meetings per year is light
- Interest in having 2-3 information sessions before substantive discussions begin
- Prey availability is the primary issue of importance for discussion
- New objective: shared understanding of threats..

Today is the deadline and will keep you posted if anything else comes in.

Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Sonia Simard [mailto:ssimard@shipfed.ca]
Sent: 2018–August-24 8:33 AM
To: Harber, Lee
Subject: RE: Indigenous and Multi-Stakholder Advisory Group - Terms of Reference

Good morning Lee,

Please find enclosed our comments.

Thank you,

Sonia Simard
Director, Legislative and Environmental Affairs
Shipping Federation of Canada
514-849-2325, ext. 226

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From: Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Sent: August 20, 2018 3:21 PM
Subject: Indigenous and Multi-Stakholder Advisory Group - Terms of Reference

Dear Participant,

At the July 30th meeting, we had discussed and provided you with a draft Terms of Reference for your consideration.

As a friendly reminder, we are requesting your feedback by **Friday August 24**. Please submit your feedback to lee.harber@dfo-mpo.gc.ca.

Thank you

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s.21(1)(a)

s.21(1)(b)

Southern Resident Killer Whale
Indigenous and Multi-stakeholder Advisory Group

Terms of Reference
(DRAFT)

Pages 3523 to / à 3524
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

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Annex A: Participant List

Sector	Name	Position	Affiliation	E-mail
Indigenous representatives			UBC	
			First Nations Summit	
			FNFC	
			FNFC	
			FNFC	
NGOs			Raincoast Conservation Foundation	
			Georgia Strait Alliance	
			WWF Canada	
			David Suzuki Foundation	
			Natural Resources Defence Council	
			Vancouver Aquarium [Oceans Wise / CORI Team]	
Shipping Industry			Port of Vancouver	
			Shipping Federation of Canada	
			Chamber of Shipping	
			Canadian Ferry Association	
Fishing Industry			Sport Fishing Advisory Board	
			BC Seafood Alliance	
Whale Watching			Pacific Whale Watching Association	

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Provincial Government	Mark Zacharias	Deputy Minister	Ministry of Environment and Climate Change Strategy	Mark.Zacharias@gov.bc.ca
Municipal Government			City of Vancouver	
Federal government	Rebecca Reid	Regional Director General, Pacific Region	Fisheries and Oceans Canada	Rebecca.Reid@dfo-mpo.gc.ca
	Carmel Lowe	Regional Director, Science, Pacific Region Science	Fisheries and Oceans Canada	Carmel.Lowe@dfo-mpo.gc.ca
	Andy Thomson	Regional Director, Fisheries Management	Fisheries and Oceans Canada	Andrew.Thomson@dfo-mpo.gc.ca
	Sylvie Lapointe	ADM, Fisheries and Harbours Management	Fisheries and Oceans Canada	Sylvie.Lapointe@dfo-mpo.gc.ca
	Michelle Sanders	Director, Clean Water Policy	Transport Canada	Michelle.Sanders@tc.gc.ca
	Megan Nichols	Director General, Environmental Policy	Transport Canada	Megan.Nichols@tc.gc.ca
	Yvette Myers	Executive Director, Oceans Protection Plan	Transport Canada	Yvette.Myers@tc.gc.ca
	Marc D'Iorio	DG, Industrial Sectors, Chemicals, and Waste Directorate	Environment and Climate Change Canada	Marc.diorio@canada.ca
	Cecilia Wong	Senior Ecosystem Scientist	Environment and Climate Change Canada	cecilia.wong@canada.ca
	Helen Davies	Field Unit Superintendent Coastal BC	Parks Canada	Helen.Davies@pc.gc.ca

DRAFT

Pages 3527 to / à 3529

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 21(1)(a)

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de la Loi sur l'accès à l'information

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Dozie, Juachi

From: Webb, Cheryl
Sent: August-24-18 9:41 AM
To: Murdoch, Sarah; Lowe, Carmel; Stewart, Julie; Davis, Neil
Cc: Thomson, Andrew
Subject: FW: SRKW Task Force Meeting on Tuesday, August 28
Attachments: Actions with survey graphs - handout.pdf; SRKW Task Force Meeting 8-28-18 Discussion Guide Predation.pdf; SRKW Task Force Meeting 8-28-18 Discussion Guide Vessels.pdf; SRKW Task Force Meeting 8-28-18 Discussion Guide Hydro.pdf; SKRW Prey Matrix SUMMARY 8 23 18 Final.pdf; Vessel Working Group Matrix final.pdf; MoreDetailed_Predation_Chinook_SRKW_WDFW_08.21.18.pdf; SKRW Prey Matrix_8-23_18_FINAL.pdf; SRKW Task Force Agenda 8 28 18 Final.pdf; SRKW Task Force Meeting Summary 08 07 18 - for TF approval - updated.docx

Agree that the 'actions with survey graph' are interesting from the perspective of directionality of the Task Force...

From: Bryce.Campbell@international.gc.ca [mailto:Bryce.Campbell@international.gc.ca]
Sent: Friday, August 24, 2018 9:31 AM
To: jeff.pelton@tc.gc.ca; christopher.marshall@canada.ca; mary-ann.spicer@canada.ca; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; gwyn.graham@canada.ca; cecilia.wong@canada.ca
Subject: FW: SRKW Task Force Meeting on Tuesday, August 28

Fresh off the SRKW Task Force presses. One very interesting document is the "Actions with survey graphs – handout.pdf", which shows the results of the Task Force survey conducted following the Aug 8 meeting (I did not participate).

Happy to field any questions I can.
Bryce

From: Susan Gulick [mailto:
Sent: August-23-18 10:20 P
Subject: SRKW Task Force Meeting on Tuesday, August 28

SRKW Task Force Members

I look forward to seeing you at the Task Force meeting in Anacortes on Tuesday. Here are some key reminders:

- The Task Force meeting will be held on Tuesday, August 28 from **10:00 AM to 5:30 PM** at the Swinomish Casino & Lodge (12885 Casino Drive, Anacortes). Please note that we have extended the meeting to 5:30. We will do our best to finish by 5:30; we need to clear the room no later than 6:30.
- A buffet lunch will be served for Task Force members, facilitators, and staff. We will not be providing breakfast pastries in the morning, but there will be light afternoon snacks. There will be coffee available all day.
- TVW will be filming the proceedings as they did at our last meeting.
- We are planning an additional Task Force meeting to finish our work for 2018. The meeting will be sometime between Nov. 1-7; you will receive a Doodle poll soon to help select the best date. This allows us a little more time to finalize the Year 1 recommendations, but it is still a very aggressive schedule.

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On Tuesday, the breakout groups will focus on the topics of predation, hydro, and vessels. Discussion Guides for each of these are attached. The agenda was guided by the survey results' identification of actions with the greatest need for additional discussion, as well as by the Working Groups' need for additional information/direction from the Task Force. This does *not* mean that these issues are more important than harvest, hatcheries, habitat, forage fish, or contaminants! We will have some time to discuss other issues during the full Task Force discussion between 3:15-4:30, and the Working Groups will continue to work on refining those actions for your consideration at the October meeting.

I have attached the following materials for the meeting. Please note that all of these will also be copied and **included in your packets** at the meeting:

- Agenda
- 3 discussion guides
  - Predation
  - Hydro
  - Vessels
- August 8 meeting summary (updated)
- Prey matrix – Summary version
- Survey results with updated action wording

In addition, I have attached additional materials that **will NOT be copied**. If you would like to reference these during the meeting, please print them or have a way to access them electronically.

- To prepare for the predation discussion there are two background documents
  - One is linked here: https://app.box.com/file/313762719350
  - The other is attached "More detailed predation chinook"
- The full Prey Working Group matrix (92 pages)
- The Vessels Working Group matrix (note that this has not changed since the last meeting)

Please let me, [redacted]r the Co-Chairs know if you have questions or concerns. I look forward to seeing you all on Tuesday!

Susan

Susan Gulick
Sound Resolutions
[redacted]
www.soundresolutions.com
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Southern Resident Killer Whale Task Force Meeting #4: Discussion Guide – Prey Group #1 (Predation)

This document is intended to help guide further discussion around the action items presented below. These action items were flagged as needing additional discussion based on responses to the survey sent to all Task Force members on 8/13/18 and/or the specific potential recommendations provided by the Working Group require Task Force Discussion.

Actions are NOT listed in priority order, and this is not the full list of potential prey-related actions.

QUESTIONS TO BE DISCUSSED IN BREAK OUT GROUPS AT THE AUGUST 28 TASK FORCE MEETING

- Which option(s) for each action do you support including in the 2018 report to the Governor? Which require further Task Force discussion, and should be saved for potential 2019 recommendations?
- What additional information do you need to make a decision?
- Do you have suggestions for improvement to a potential recommendation?
- Is the package of predation recommendations bold enough to make meaningful progress towards Southern Resident Recovery?

PREDATION ON SALMONIDS BY BIRDS AND PINNIPEDS

There is a growing interest on the effects of predation on salmon in Washington, especially predators like predatory fish, fish-eating birds, and pinnipeds.

"Pinniped" is a term for sea lions, seals, and other related marine mammals. They regularly "haul out" onto beaches, rocks, and human-made infrastructure such as buoys and docks, which are referred to as artificial haul-outs. Pinniped consumption of salmon has increased over the last 40 years in the Pacific Northwest as their populations rose after the adoption of the Marine Mammal Protection Act. Recent available information confirms that pinniped predation on Columbia River and Bonneville Dam is adversely affecting the recovery of threatened salmon and both non-lethal and lethal control actions have been underway to address this issue for several years. Less is known about the impact of seal and sea lion predation on salmon in the Puget Sound and Outer Coast and there is uncertainty around whether pinniped predation may be a limiting factor for the recovery of ESA-listed fish stocks, particularly Chinook salmon, in these areas. Bioenergetics modelling work (Chasco et al. 2017) suggests that while killer whales consume the largest biomass of Chinook, harbor seals consume the largest number of individuals because they consume both out-migrating smolts and adults. These results suggest that the increase in abundance of harbor seals in particular may be adversely affecting Chinook, and consequently, Southern Residents. Although Chasco et al. suggests that pinnipeds, and harbor seals in particular, may be limiting Chinook populations, these effects vary over space and time. In addition, new predator diet and population estimates since the publication of the Chasco et al. analyses indicate the need to refine these models. Both Canada and WDFW are in the process of collating new information and updating models to ascertain more recent and geographically-specific levels of Chinook consumption by pinnipeds to determine if and where any additional predation control actions are needed to protect Chinook and Southern Residents.

Predatory birds (e.g., cormorants, terns) benefit from artificial islands, piers, pilings, and other features that offer them high reproductive success and advantageous resting and feeding structures. A variety of management actions have been implemented with the goal of reducing predation of fish by bird predators, including controlling the size of breeding populations on the lower Columbia estuary and some interior stretches of the Columbia River (by reducing the spatial extent of the breeding area and/or planting vegetation at the sites to make them inaccessible to terns).

Predation B4: *Continue the development of additional science to better understand pinniped predation on salmonids, especially Chinook.*

Options from Working Group:

a) Fund monitoring to provide area specific estimates of Chinook survival between the mouth of the Columbia River and Bonneville Dam.

b) Support the continued development of science to better understand the extent pinniped predation in Puget Sound and the Outer Coast to determine and apply appropriate management actions. Analyses should help determine if pinniped predation is a limiting factor for Chinook in each area, where and what types of management actions are best suited to the situation, and, if needed, provide any information necessary to secure authorization to perform needed control actions. Both the science and assessment of the management actions should account for factors that may exacerbate or ameliorate predation, including infrastructure haul outs, hatchery strategies, and the presence/absence of forage fish or other fish that are staple food for pinnipeds.

Predation B4: Working Group Ratings	
Effectiveness	This action was pulled out separately from the other predation actions by the Working Group after the development of these tables so ratings not yet available
Affordability	Not yet available
Ease of implementation	Not yet available
Timeline for benefits to SRKW	Intermediate (dependent upon findings and then associated regulatory process after studies completed)

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Southern Resident Killer Whale Task Force Meeting #3: Summary (DRAFT)

August 7, 2018 in Wenatchee

Attending: *(This list includes only those who signed the sign-in sheet)*

Task Force members:

Phillip Narte sitting in for Amy Scarton	Washington State Department of Transportation
Amy Windrope	Washington Department of Fish and Wildlife
Commissioner Andy Hover	Okanogan County
Cecilia Gobin	Northwest Indian Fisheries Commission
Katie Wrubel Haley Kennard sitting in for Chad Bowechop	Makah Tribe
Dave Herrera	Skokomish Tribe
Donna Sandstrom	The Whale Trail
George Harris	NW Marine Trade Association
Jacques White	Long Live The Kings
Commissioner Jamie Stephens	San Juan County
Lisa Wilson sitting in for Chairman Jay Julius	Lummi Nation
Jeff Dickison	Squaxin Island Tribe
Jeff Friedman	Pacific Whale Watch Association
Kaleen Cottingham	Washington State Recreation and Conservation Office
Norma Sanchez sitting in for Karen Condon	Colville Confederated Tribes
Kathy Pittis	Port of Anacortes
Evan Sheffels sitting in for Kelly McLain	Washington State Department of Agriculture
Ken Balcomb	Center for Whale Research
Kristin Swenddal	Washington State Department of Natural Resources
Chairman Leonard Forsman	Suquamish Tribe
Les Purce	Task Force Co-Chair
Teresa Mongillo sitting in for Lynne Barre	NOAA
Maia Bellon	Washington State Department of Ecology
Mark Doumit	Washington Forest Protection Association
Mindy Roberts	Washington Environmental Council

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Chinook Predation by Pinnipeds, Birds and Predatory Fish in Washington

PINNIPEDS

Columbia River

Columbia River salmon and steelhead are impacted by sea lions that prey on them prior to moving up the fish ladders at Bonneville Dam and in other areas in the lower Columbia. A report by the Army Corps of Engineers estimated that sea lions have consumed tens of thousands of migrating fish in these locations since the 1990's, including some from threatened and endangered runs protected under the federal Endangered Species Act (ESA). The federal Marine Mammal Protection Act (MMPA) of 1972 specifies the actions that States are allowed to take to manage pinnipeds such as California sea lions. Recognizing that predation by a growing pinniped population can jeopardize salmon and steelhead stocks at risk of extinction, Congress amended the MMPA in 1994 to allow States to apply for limited lethal removal authority under a narrow set of circumstances (Section 120 of the MMPA).

In 2006, the fish and wildlife agencies in Washington, Oregon, and Idaho applied for permits under Section 120 of the MMPA, in response to the increasing number of sea lions preying on wild salmon. In March 2008, the States received federal authorization to use lethal measures to remove individual sea lions that met specific criteria, although the first priority was to relocate them to zoos and aquariums. The federal permits and state actions were legally challenged by the Humane Society of the United States, but the permits were eventually upheld by the Ninth Circuit Court of Appeals.

The California sea lion population along the West Coast is no longer considered at risk and is estimated at 250,000-275,000 individuals, up from <75,000 individuals when the Marine Mammal Protection Act was adopted back in 1972. From 2008 to 2017 190 California sea lions were removed from the Columbia River: 15 were placed in permanent captivity at zoos or aquaria, 7 died in accidents incidental to trapping, and the remainder were chemically euthanized. Of note, all of the sea lions that are involved in Columbia River predation are males that migrate north from their California breeding rookeries.

While exclusion gates keep sea lions out of the fishways, other non-lethal deterrents, such as pyrotechnics and rubber buckshot, only have a temporary effect. Wildlife managers from Washington and Oregon and federal and tribal partners have been harassing sea lions from the area immediately below Bonneville Dam for over a decade. The states are continuing the sea lion predation control program (including non-lethal and lethal measures) at Bonneville Dam in coordination with the USACE, Columbia River Intertribal Fish Commission, and NOAA Fisheries. The annual mean abundance of Steller sea lions at the Bonneville Dam has increased over time. The annual mean abundance of California sea lions has gone up and down with peak abundances occurring in 2006-2008 and in 2015 and 2016. The percent of the run taken by each pinniped species has followed a similar pattern with linear increases for Stellers and modulating change for California. In addition, California sea lions have become an increasing problem for salmon runs on the Willamette River, specifically predation at Willamette Falls.

The extensive process required to document and apply for a MMPA Section 120 permit has delayed actions to address sea lion predation. Congress acted in an attempt to streamline this process by amending the MMPA. Congresswoman Herrera Beutler and Senator Cantwell have introduced bills in their respective chambers that would provide state agencies and tribes with greater flexibility to manage sea lion populations in the Columbia

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River. Rep. Herrera- Beutler's bill passed the House of Representatives and Sen. Cantwell's bill passed out of committee but has not yet been voted on by the Senate.

Puget Sound and the Outer Coast

Unlike our understanding of pinniped predation on Columbia River and Bonneville Dam, a readily-available rich data set does not exist to evaluate the impact of seal and sea lion predation on salmonids specifically for the Puget Sound, Strait of Juan de Fuca, and Outer Coast - resulting in some level of uncertainty about their impact on salmon and steelhead populations. While we do know that marine mammal consumption of salmon has increased over the last 40 years for the entire west coast of North America, we are not certain as to magnitude of this change or whether pinniped predation may be a limiting factor for the recovery of Puget Sound and outer Washington coast ESA-listed fish stocks, particularly Chinook salmon (Chasco et al. 2017b). Recent Pacific coast bioenergetics modelling of marine mammal salmon predators suggests that all of the coast-wide while fish-eating killer whales consume the largest biomass of Chinook salmon and harbor seals consume the largest number of individuals because they consume both out-migrating juveniles and adult fish. Harbor seals in Puget Sound consume twice the Chinook adult equivalents than Southern Residents consume and six times greater than the combined commercial and recreational catches (Chasco et al. 2017a, 2017b). These results suggest that the increase in abundance of harbor seals, in particular, may be adversely affecting the recovery of threatened Chinook salmon, and consequently, the endangered killer whales within the Salish Sea Region.

Although the work by Chasco et al. (2017a,b) suggest that pinnipeds, and harbor seals may be limiting Chinook populations, these effects vary over space and time. New predator diet and population estimates since the publication of the Chasco et al. (2017a, 2017b) analyses indicate the need to refine these models. Specifically, new information on: (1) harbor seal diet collected from several locations in Puget Sound and the Strait of Georgia suggest that in 2016 harbor seals consumed less Chinook than previously estimated, and that this consumption is seasonal, not year-round, (2) relatively recent surveys conducted to estimate harbor seal populations suggest that the harbor seal populations have stabilized or decreased slightly (but the analyses of these trends is not complete), and (3) new diet samples for California sea lions in Puget Sound is in-hand but has not been analyzed or summarized.

Because pinniped diet varies both spatially and temporally, it is important to examine these relationships at scales that can be addressed by management to be most effective. Any potential management response would require an understanding of predation at a finer spatial scale than the "Salish Sea" and may be focused at "pinch points" such as certain estuaries at certain time of years that coincide with out-migrating smolts or returning adults.

The Washington Department of Fish and Wildlife, along with partners like Long Live the Kings, NOAA's Northwest Fisheries Science Centre, Western Washington University, tribal co-managers and others have continued to assess pinniped predation in Puget Sound and Outer Coast. Many of the same scientists that were involved in the Chasco (2017) and Nelson (2018) studies are working together to support these analyses that will include more recent years and regionally-specific information. WDFW and partners are now compiling the information in an assessment that aims to address the following questions:

- What is the estimated level of consumption of juvenile and adult Chinook salmon by harbor seals, California sea lions, and Steller sea lions in the following regions: Washington coast, Strait of Juan de Fuca/San Juan Islands/Eastern Bays, Hood Canal, and South-central Puget Sound?
- How much does that proportion of predation impact Chinook survival compared to other types of mortality? What is the relative contribution of predation in the context of other impediments to salmon recovery in Washington?
- Is the level of consumption in these areas impeding Chinook recovery?

In order to perform the analysis, WDFW and partners are currently compiling information (from internal sources and external partners) and anticipates completing the initial assessment by December 2018. The information

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includes determining the consumption of adult and smolt Chinook per-year by each pinniped predator, which is a function of: (1) pinniped population estimates by region, (2) pinniped daily energy demands, (3) proportions of diet that consists of adult and juvenile Chinook salmon by region/month, (4) age-specific energy of Chinook salmon; and (5) age-specific seasonal availability of wild and hatchery Chinook in each of the regions. Previous studies provide only a portion of the data needed to inform this assessment. WDFW is currently awaiting new data that will be integral to determine if, and to what extent, pinniped predation is a limiting factor in the recovery of Chinook (and killer whales).

In addition to this work, these and other collaborators are using the Atlantis Ecosystem model to assess harbor seal predation of juvenile Chinook, accounting for comprehensive ecosystem effects (e.g. harbor seals also eat salmon predators) and weighing the relative impact harbor seal predation vs other sources of mortality. This work is being led by NOAA's Northwest Fisheries Science Center and is being performed as part of the 60 entity Salish Sea Marine Survival Project. Limitations to each of these analyses will be included when reporting.

Should the analysis indicate that predation is a limiting factor, WDFW, working with NOAA, the tribes and other partners, would then evaluate logistical, administrative, and socio-political considerations of pinniped management. If more information is needed, WDFW and partners will outline the additional research needs to address uncertainty. If and when appropriate, WDFW would work with federal and tribal co-managers on assessing logistical and administrative pathways for management actions, including both non-lethal and lethal activities.

BIRDS

Cormorants

WDFW has participated in a federal/state/tribal workgroup convened by USACE and was a cooperating agency in the development of action plans to address predation of ESA-listed juvenile salmon by cormorants that nest on islands in the lower Columbia River. Over a 15-year period, double-crested cormorants at the Columbia River estuary consumed about 11 million juvenile salmonids per year. Mortality rates of juvenile salmonids increased 3.5 percent between the 1983-2002 period, when double-crested cormorant numbers were lower, and the 2003-2009 period. Salmonid mortality is highest in the lower 31 miles of the Columbia River, which coincides with the foraging area of double-crested cormorants that nest at East Sand Island near the Columbia River mouth. The USACE has performed active management to control the size of the double-crested cormorant population breeding on the lower Columbia River estuary. The goal of management of double-crested cormorant is to reduce the breeding population at East Sand Island from about 15,000 pairs to about 5,600 pairs through hazing, egg oiling, and lethal removal of adults. (The colony at the lower Columbia River estuary is the largest in western North America.) WDFW, although supportive of actions to reduce the predation, expressed concerns about the re-distribution potential of the birds to other areas of concern within the state. Some recent observations indicate that cormorants may be redistributing to new sites. Through its role in the Pacific Flyway Council, WDFW helped develop a management plan and a survey strategy for this species, and also contributed to a policy position on avian predation on fish.

Terns

Geographic areas of documented Caspian tern impacts to salmonids include the lower Columbia River estuary and segments of the Columbia River in eastern Washington. Both of these areas are associated with islands maintained by the U.S. Army Corps of Engineers. Population-level impacts to salmonids have not been documented in other areas, although there are concerns about potential impacts. A variety of management actions have been implemented with the goal of reducing predation of fish by Caspian terns, including controlling the size of the Caspian tern breeding population on the lower Columbia estuary and at an interior stretch of the Columbia (by reducing the spatial extent of the breeding area and/or planting vegetation at the sites to make them

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inaccessible to terns). At the Columbia River Estuary, the percentage of smolts consumed by Caspian terns counted at Bonneville Dam was 1.4 percent for upper Columbia River spring Chinook, compared to 3.9 percent prior to reduction of the tern colony. The colony at the Columbia River estuary was the largest in North America at the time of management implementation. Along the interior Columbia River, the average annual predation rate on spring and summer Chinook (hatchery) was ≤ 1 .4 percent based on data from the Goose Island nest colony. Consumption of smolts by terns in 2000 was 465,000, and in 2001 it was 679,000 at Crescent Island, a nesting area on the interior Columbia River.

FISH

Northern Pike

Northern pike are an apex nonnative invasive predator in Washington State that can restructure aquatic fish communities in some cases and lead to decimation of native fish communities including salmon and steelhead. Northern pike are native to the mid-western United States, parts of Alaska, and the southern Saskatchewan River drainage in Montana. Nonnative northern pike established in the Clark Fork drainage, Montana, after introductions in the 1950s. Over the last several decades, illegal introductions of northern pike led to an expansion of their range into the Blackfoot, Bitterroot, Clark Fork, and Flathead systems in Montana, the Coeur d'Alene and Spokane river systems in Idaho, and throughout much of the Spokane River in Washington. Further expansions were documented in 2004 into the Lower Pend Oreille River, in 2009 in the Columbia River below Keenleyside Dam in British Columbia, and in 2007 in Lake Roosevelt. Ongoing fisheries investigations have confirmed that northern pike abundance in Lake Roosevelt, currently assumed to be the furthest downstream establish population, is steadily increasing. The Federal Columbia River Power System is comprised of 14 hydropower projects on the mainstem Columbia River and several of its major tributaries. These facilities are operated for purposes including power production and flood control, as well as for fish, wildlife, and recreation. The operation of these projects has changed the aquatic environment from free flowing rivers to slower moving reservoir habitats. Reservoir inundation has created conditions, such as increased water temperatures and shallow vegetated areas, conducive to the life histories of lacustrine fish species, like northern pike. The continued slow progression of northern pike downstream from their original introduction point is evidence that this species is finding habitat conducive to allowing it to expand and increase in abundance. Based on the past several decades of continued downstream movement of this species, WDFW has concern that they will continue expanding in abundance in the blocked area above Chief Joseph and Grand Coulee dams, having irreversible impact on native and important gamefish communities. In addition, northern pike are extremely likely to expand their distribution into the anadromous zone of the Columbia River, putting at risk the billions of dollars invested into the recovery of salmon and steelhead populations.

Suppression and removal of northern pike is one of the number one piscine predation priorities for WDFW. This work has historically been underfunded relative to the scope and scale of the potential impacts for salmon and steelhead recovery. WDFW is currently working on a policy white paper to outline the issue and potential actions.

Northern Pikeminnow

Northern pikeminnow is a native piscine predator with impacts for salmon and steelhead populations. The species is managed for salmon recovery purposes under a sport reward program administered by BPA.

Walleye and Bass

Walleye and bass predation is an issue in the Columbia River Basin and in Puget Sound as these fish prey on juvenile salmonids and compete for habitat. WDFW recently enacted fishery regulation changes to reduce effects of predation by these warm waters species.

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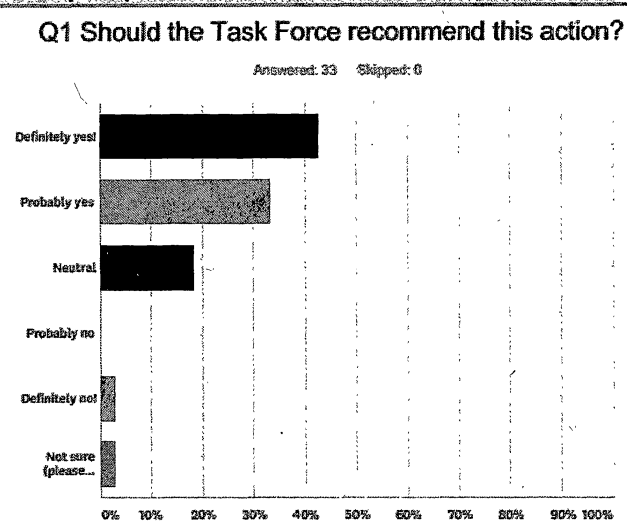
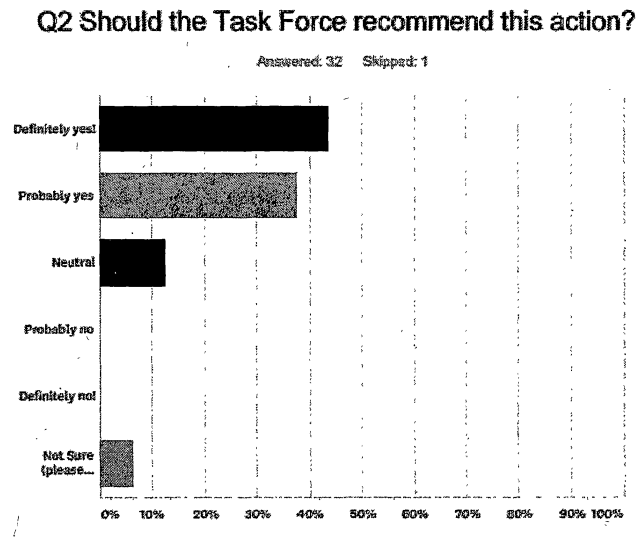
Available online: https://www.governor.wa.gov/sites/default/files/Survey%20graphs.pdf

Southern Resident Killer Whale Task Force

Potential actions and Task Force survey results

CONTAMINANTS

Action	Survey Response
Action #1: *Reform Federal Toxic Substances Control Act to prevent new chemical threats.* Reform federal toxics law to take a precautionary approach to chemical regulation. Washington State could work to establish an interstate program with other west-coast states through the Pacific Coast Collaborative or the National Caucus of Environmental Legislators. This would include requiring toxicity data disclosures, require minimum data sets and evaluations including assessments of alternatives, and subsequent enforcement.	
Action #2: *Ban by-product ("inadvertent") PCBs in consumer products through existing state policy tools.* This could also include accelerating the implementation of the ban on PCBs in state purchased products. It would initiate a phase out with full implemented targeted for 2025. Ecology would conduct alternatives assessments, product testing and enforcement. The State would need new regulatory authority to set limits and enforce a full ban.	
Updated language after survey: **Action #2:** Accelerate the implementation of the ban on PCBs in state purchased products and make information regarding PCB levels in state procured products and packaging available online so other purchasers can access this information and eliminate their purchase of PCB containing products	

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Available online at: https://www.governor.wa.gov/sites/default/files/Prey%20Working%20Group%20Matrix.pdf

SOUTHERN RESIDENT KILLER WHALE TASK FORCE PREY POTENTIAL ACTIONS

SUMMARY TABLE OF PREY POTENTIAL ACTIONS FOR 2018 REPORT

The Table below (Pages 1-7) is intended to be an abbreviated way to see the outcomes of the Prey Working Group discussions on each action. For more detailed information on an action and an explanation of ratings, click the hyperlink embedded in each action name to be directed to the full matrix of considerations.

Effectiveness: the ability for the action to contribute to SRKW recovery by improving prey abundance

Affordability: High (Under $30million), Medium ($30million-$100million), Low ($100million+)

Ease of Implementation: Considers technical, regulatory, social, and political factors

Timeline of SRKW benefits once action is implemented: Immediate (0-3 years), Intermediate (3-10 years), Long-term (10+ years)

Note: The Prey Working Group would like to stress that there is a great deal of uncertainty related to many of the rankings of the actions considered due to incomplete knowledge. More time to discuss and source information or create information through models, studies, etc. would/will create greater certainty around these rankings.

Green font indicates those actions were highly supported by the Task Force on 8/7/18
Black font indicates those actions that had a mixed amount of support and/or those actions that the Task Force need more information in order to make decisions regarding support
(*) indicates low level of agreement in the Working Group for rating

	Action (include geographic specificity or principles, as appropriate)	E	A	I	Time to SRKW Benefit	Supporting and Dissenting Opinions on Ratings (if applicable)	Working Group Notes
Hydro	**A1.** Recommend that Ecology adjust total dissolved gas standards (match or exceed OR's gas caps) on the Snake and Columbia rivers to allow flexibility to adjust spill regimes, as needed, to benefit Chinook salmon and other salmonids. **Potential specific recommendations:** **a) Recommend that Ecology remove the 115% forebay total dissolved gas standard, leaving just the 120% tailrace standard in place on the Snake and Columbia Rivers to allow flexibility to adjust spill regimes, as needed, to benefit Chinook salmon and other salmonids.**	H	M	H *	Intermed	Supporting: • Increased spill leads to increased survival rates of migrating fish. • Even if funds are reallocated away from habitat etc. due to increases in spill, the action has the potential to result in such an improvement to the number of fish successfully migrating that it would be worth it. Also, other funding sources could be sought to replace those lost.	• Affordability depends on how much is spilled and when (spilling to 125% 24 hours a day would be relatively less affordable, but other amounts of spill, or flexible spill regimes could be medium or high affordability) • Spill regime and gas cap not inextricably linked – TF could recommend changing gas caps without changing spill regimes, which would allow flexibility to use the best available science to decide how much spill is beneficial at specific dams/systems, years, etc.

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Southern Resident Killer Whale Task Force Meeting #4: Discussion Guide – Vessels

This document is intended to help guide further discussion around the action items presented below. These action items were flagged as needing additional discussion, in part based on responses to the survey sent to all Task Force members on 8/13/18.

Actions are NOT listed in priority order.

QUESTIONS FOR THE TASK FORCE

For each potential action below, please discuss and reply to the following questions:

- Which action(s) do you support including in the 2018 report to the Governor? Do any of these actions require further Task Force discussion, such that they should be saved for potential 2019 recommendations?
- What additional information do you need to make a decision?
- Do you have suggestions for improvement to a potential recommendation?
- Is the package of vessel recommendations bold enough to make meaningful progress towards Southern Resident recovery?

In the presence of fast-moving boats, SRKW are subjected to louder noise emissions, greater masking effects, and potential for temporary and permanent hearing changes with longer exposures.

Action #1 (in survey): *Establish a no-wake zone with a speed limit of 5 knots in all Washington State waters for small vessels (<65ft) and commercial whale watching vessels within sight of orcas (and no less than 400 yards), with discretion to enforcement officers, while dedicating resources and capacity towards associated education and enforcement.*

Updated Action #1: *Establish a no-wake bubble with a speed limit of 5 knots in all Washington State waters for small vessels (<65ft) and commercial whale watching vessels within sight of orcas (extending 0.5 nautical mile or about 1km), with discretion to enforcement officers, while dedicating resources and capacity towards associated education and enforcement.*
Note: A Subgroup of the Vessels Working Group met on 8/22 and unanimously suggested extra emphasis on this updated Action #1 in lieu of the 400-yard bubble in Action 10 based on Houghton et al. (2015) and other science.

Survey Input from Task Force on Action #1:

- Task Force members recommended modifications/clarifications to this action, including:
  - Including dedicated state funding for enforcement in the action description.

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Available online at:https://www.governor.wa.gov/sites/default/files/Vessel%20Working%20Group%20Matrix.pdf

SOUTHERN RESIDENT KILLER WHALE TASK FORCE VESSELS POTENTIAL ACTIONS

SUMMARY TABLE OF ALL VESSELS POTENTIAL ACTIONS ASSESSED IN 2018

The Table below (Pages 1-7) is intended to be a condensed way to see the outcomes of the Vessels Working Group surveys and discussions on each action. For more detailed information on an action and an explanation of ratings, please see the two survey results files (and photos of flip charts from the meetings). Please see the summary compiled by NOAA for answers to Task Force questions and additional context. Actions with an effectiveness rating of High are indicated in **Bold**. High, Medium and Low (H, M, and L) scoring determinations were made by identifying which category predominated in terms of highest percentage and had a difference exceeding 10% of the next highest score; otherwise such close scorings were characterized as M. Two effectiveness scores and one implementation score were upgraded from the initial survey results based on feedback during WG discussions and marked with an *.

Effectiveness (E): The ability for the action to contribute to SRKW recovery by reducing vessel disturbance and/or underwater noise
Affordability (A): High, Medium, Low
Ease of Implementation (I): Considers technical, regulatory, social, and political factors
Timeline of SRKW benefits once action is implemented: Immediate (0-3 years), Intermediate (3-10 years), Long-term (10+ years)

Note: The scores for actions marked "updated" were assessed before the WG directed modification to the action. Actions marked "new" arose from actions recommended for further assessment by the WG on July 12.

The ^{EE} superscript indicates the need to add significant capacity for associated education and enforcement activities, per Actions 25 and 26 in Appendix.

The $^{A1, A2, etc.}$ superscripts indicate conceptual overlap between the action and specific numbered actions in the longer Appendix list of potential actions. The Vessels WG requested that these actions be "nested" (associated) with each assessed action where appropriate.

The Vessels Working Group would like to acknowledge that there is a great deal of uncertainty related to many of the rankings of the considerations for actions due to incomplete knowledge. More specificity on the scope and leads for each action (this is often pending) and time to source information or create information through models, studies, etc. would/will create greater certainty around these assessments.

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Pages 3694 to / à 3715

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SOUTHERN RESIDENT KILLER WHALE (SRKW) TASK FORCE

AGENDA

Tuesday, August 28, 2018 9:45 a.m. - 5:30 p.m.
Swinomish Casino and Lodge, 12885 Casino Drive
Anacortes

Coffee will be served at 9:45. Please come early to network with colleagues. The meeting will start promptly at 10:00 a.m.

Time	Agenda Item (Action items are marked with "!")	Objective & Reference Materials	Presenter(s)
10:00 *(30 min)*	**Welcome & Introductions, Agenda Review** • Tribal welcome, blessing & opening message • Welcome by co-chairs • Introductions • Review agenda ! Approve meeting summary • Updates	**Information** *Reference materials:* • *Agenda* • *Summary of August 8 meeting*	Debra Lekanoff, Swinomish Tribe Ray Harris, Co-Chair, First Nation Summit and Coast Salish Gathering Les Purce, Co-chair Stephanie Solien, Co-chair Susan Gulick, Facilitator
10:30 *(20 min)*	**Survey Results and Next Steps** • Overview of survey results • Next steps in developing recommendations • Instructions for break-out groups/Desired outcomes	**Information** *Reference materials:* • *Survey Results*	Nora Nickum, Consulting team project manager
10:50 *(75 minutes)*	**Breakout Sessions** ✓ Hydropower ✓ Predation ✓ Vessels • Review and refine proposed actions	**Information, Discussion** *Reference materials:* • *Discussion Guides*	Facilitated Breakout Sessions
12:05 *(30 min)*	**LUNCH** *Lunch will be provided for Task Force members and staff*		
12:35 *(2½ hours)*	**Continue Breakout Sessions** *(2 rotations of 75 minutes)*	**Information, Discussion**	Facilitated Breakout Sessions
3:05	***10-minute break** with light snacks*		
3:15 *(75 min)*	**Overview of Breakout Session Results and Next Steps** • Report from breakout groups • Task Force Discussion • Timeline for draft report • Upcoming meetings	**Information, Discussion**	Breakout Group Representatives Nora Nickum, Consulting team project manager Susan Gulick, Facilitator
4:30 *(60 min)*	**Public Comment**	**Information**	Public/observers Susan Gulick, Facilitator
5:30	**Closing and Adjournment by Co-Chairs**		Les Purce, Co-chair Stephanie Solien, Co-chair

Upcoming Meetings

- ***Task Force meeting #5***
  October 18, 9 am to 5 pm, Thurston County Expo Center, 3054 Carpenter Road, Lacey

- ***Task Force meeting #6***
  Sometime between November 1-7, in the Olympia/Tacoma area

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Available online at:
https://www.governor.wa.gov/sites/default/files/SRKW%20Task%20Force%20Meeting%208-28-18%20Discussion%20Guide%20Hydro%20REVISED.pdf

Southern Resident Killer Whale Task Force Meeting #4: Discussion Guide – Prey Group 2 (Hydropower)

This document is intended to help guide further discussion around the action items presented below. These action items were flagged as needing additional discussion based on responses to the survey sent to all Task Force members on 8/13/18 and/or the specific potential recommendations provided by the Working Group require Task Force Discussion.

Actions are NOT listed in priority order.

QUESTIONS TO BE DISCUSSED IN BREAK OUT GROUPS AT THE AUGUST 28 TASK FORCE MEETING

- Which option(s) for each action do you support including in the 2018 report to the Governor? Which require further Task Force discussion, and should be saved for potential 2019 recommendations?
- What additional information do you need to make a decision?
- Do you have suggestions for improvement to a potential recommendation?
- Is the package of hydropower recommendations bold enough to make meaningful progress towards Southern Resident Recovery?

For Hydro actions A1, A2 (Recommend that Ecology adjust total dissolved gas standards (match or exceed OR's gas caps) on the Snake and Columbia rivers…) and F2 (Remove the four lower Snake River dams to benefit Chinook passage), the Task Force has requested more information in order to fully consider these options. Time in the breakout groups will be used to determine what the Task Force would like to know to move the discussion forward in order to organize webinars to answer these question in the coming weeks.

HYDROPOWER OVERVIEW

Issues with Dams

Dams can block or impede fish passage, slow the migration rate of juveniles, and alter riverine ecosystems and their function, which negatively affects salmon survival. In the Columbia-Snake river system, juvenile salmon in particular can have a difficult time passing to downstream habitat on their outmigration to the sea. When the current draws juvenile fish into the dam's turbines, fish can be injured or killed when they strike the turbine blades or concrete walls, or implode from the intense pressure generated from falling and spinning water in the turbines. With many fish needing to pass multiple dams (up to nine in the Columbia-Snake system) on their way to the sea, the likelihood of injury or death can be quite high. Even where juvenile fish passage has been improved with new passage technologies and "fish friendly" water and dam management practices, the cumulative toll of passing multiple dams may remain significant. Some dams—some hydro and some not—have no fish passage at all.

Dam Retrofits & Modifications

Dams can be retrofitted to include structural features that help juvenile and adult fish pass through the dam without injury or death. Dams can also be operated to minimize impact on migrating fish. For juveniles, physical changes at dams including bypass chute systems, spillway weirs making it easier for fish to find the entrance to the spillway, surface collectors behind high-head dams, and new turbine designs that are more efficient and fish-friendly, can all help improve survival rates. Adults migration benefits from fish ladders (or multiple fish ladders at large dams), or "trap and haul" facilities at high head dams where regular fish ladders may be infeasible.

Salmon Recovery Efforts

The hydroelectric dams (both federal and non-federal) on the Columbia and Snake rivers were a major factor in the listing of 13 stocks of Columbia salmon and steelhead under the Endangered Species Act (ESA) in the 1990s, and continue to be a factor in depressing spring Chinook and other Columbia Basin salmon and steelhead populations. Thanks to improved dam operations and off-site habitat mitigation, some of these listed populations, such as mid-Columbia River steelhead and Snake River fall Chinook, have begun to rebound (but not yet to the point of de-listing), while others, such as upper Columbia spring Chinook and Snake River spring/summer Chinook, remain well below ESA de-listing goals. But even depressed and at-risk stocks have responded to some to degree to improved hydrosystem operations (such as increased "spill" over the dams, sometimes over innovative passage routes like adjustable spillway weirs) and tributary and estuary habitat restoration.

Dam Removal

Dam removal has been shown to benefit salmon. Within a few months of the removal of the Elwha Dam in northeast Washington, wild and hatchery salmon were using the mainstem and tributaries of the Elwha River; these included 4,000 spawning Chinook in the first season following dam removal. Depending on the type of dam, dam removal can also improve spawning and rearing habitat by flushing or removing existing siltation and preventing future siltation from occurring. It can also support healthy downstream habitat as small rocks, nutrients, and debris are no longer inhibited by the dam. Fish migration survival rates are improved due to safer and faster migrations, and the temperature of the water released from a dam may be cooler downstream once the reservoir no longer exists.

Dam removal, especially of larger facilities, can be a long and cost-intensive process, and the outcomes can vary depending on the river system. The efficacy and trade-offs involved with large-scale changes to dam operations and/or configuration (up to and including lower Snake River dam removal) has been debated among co-managers and stakeholders for decades.

Action Hydro F1: *Remove other hydro and non-hydro dams in locations that most benefit Chinook passage.*

Pages 3718 to / à 3721
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s.19(1)
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Khanna, Sukriti

From: Cottrell, Paul
Sent: July-26-18 8:01 AM
To: Jansen, Willi; Ludlow, Mandy
Subject: Re: Another SRKW dies

Thank-you, really appreciated the fyi. Last night the dead calf was spotted still being carried by mom at Monark Head. The animals travelled to East Point and we're heading towards the Fraser at dark. Sound watch and straitwatch will be out today. Once mom (J35) drops the calf (we are worries about her health) we are hoping to collect the calf for necropsy. I hope to get the animals location this morning and if the calf is still being carried. If you guys have boats on the water and the calf is not being carried. By mok it would be great if we could try to collect. I'll give you guys a call later this morning. I have a call now on J50 who is not looking good at all. Talk soon.
Best,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Jansen, Willi
Sent: Thursday, July 26, 2018 7:47 AM
To: Cottrell, Paul; Ludlow, Mandy
Subject: FW: Another SRKW dies

[redacted] For your info ONLY please. Just thought you should be in the loop.

Willi Jansen
Fishery Officer | Officier de Pêcherie
Conservation and Protection | Conservation et Protection
(250)746-9721 (office) [redacted] (cell)

-----Original Message-----
From: [redacted]
Sent: July-25-18 10:54 PM
To: [redacted]
Cc: [redacted] Jansen, Willi
Subject: Re: Another SRKW dies

[redacted]

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>
>
>
> WDFW
>
>
>
> -----Original Message-----
> From: Ken Rea [mailto:captken@spiritoforca.com]
> Sent: Wednesday, July 25, 2018 10:36 PM
> To:
Willi Jansen <Willi.Jansen@dfo-mpo.gc.ca>
> Subject: Another SRKW dies
>
> I posted this today and pisses me off where we are at.
>
> "I really believe it is time for NOAA to be removed from the picture. Turn it over to WDFW (Washington Department of Fish and Wildlife) and give them the resources that NOAA is squandering, to bring back the Chinook Salmon.
>
> This is my suggestion to that end to get rid of the agency that is second only to Sea World in killing our Southern Resident Killer Whales.
>
> WDFW in turn could met out funds to Wild Fish Conservancy, Skagit Salmon, Center For Whale Research and other similar NGOs that are determined to bring more food to the table for our SRKW's."
>
> We are all grieving at the loss of Talequahs calf and soon to die J50 Scarlett.
>
>
>
>
>

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Khanna, Sukriti

From: Brekke, Heather
Sent: August-27-18 8:33 AM
To: Govender, Rhona; Jones, Lisa Ann; Lee, Tatiana; McMillan, Christie; Shaikh, Sharlene; Wells, Caroline
Subject: FW: CSAP requests for science advice Callout 2018: heads up and mid-year review
Attachments: 2018-19_MidYear_update_achievables.pdf; 2018-19_MidYear_update_uncertains.pdf; 2018-19Mid_year_review.xlsx; 2018-19_MidYear_update_schedule.pdf

FYI and for further discussion. we will need to have all RSIAs signed off by Andy prior to Oct 31, 2018, so we will likely need this off our desks the week prior.

From: MacDougall, Lesley
Sent: August-24-18 2:44 PM
To: Brekke, Heather; Cottrell, Paul; Grout, Jeff; Jackson, Corey; Johansen, Jeff; Keizer, Adam; Lamont, Averil; Mar, Amy; Leslie, Karen; Nantel, Martin; Fershau, Jonathan; Grant, Paul; Payne, Brigid; Hillier, Joy; Oldford, Greig; Nutton, Byron; Ladwig, Aleria; Mahoney, Jason; Willis, David (Pacific); Cheung, Alice; Davis, Neil; Galbraith, Ryan; Whitehouse, Timber; Luedke, Wilf; Millar, Nathan; Holmes, John; Kennedy, Eddy; Whelan, Christie; Higgins, Mark; Chamberlain, Jon; Spence, Brenda; Kanno, Roger; Paylor, Adrienne; Jepps, Shelley; Ridings, Pauline; Rogers, Juanita; Wylie, Erin; Grant, Paul; Webb, Allison
Cc: Brown, Laura (Pacific); Masson, Colin; Gotch, Steve; Bate, Angela; Thomson, Andrew; Webb, Cheryl; Smith, Ken; Lowe, Carmel; Nener, Jennifer
Subject: CSAP requests for science advice Callout 2018: heads up and mid-year review

Client & Science Managers (please share in your group if I've missed managers)

RSIA Callout warning:

This is an early warning for the RSIA callout, which will follow in about 2 weeks. 2018 Requests for Science advice, signed off by your Regional Director, will be due **October 31st 2018.**

To position you for this year's RSIA callout, a mid-year review RSIA spreadsheet is also on the regional drive under the folder "CSAP" with the following updates from callout2017:

- 2017-18 status has been updated
- Not achievable RSIAs have been deleted
- Withdrawn RSIAs have been deleted

I have updated the folders on the regional drive under the folder "CSAP" for you to place your NEW 2018 RSIAs. Since we are now into multiyear planning processes, I have imported the previous RSIA's (callout and in-year) as well. You won't need to re-submit previous RISAs, but you will need to confirm the previous RSIA is still needed, and where it belongs in the priority list.

Science Managers: *you too can submit RSIAs. This is applicable for models, frameworks or methods that are developed to provide advice to clients.* I also ask you to review your B-Base funded programs (SPERA, ACASP, IGS, PARR, etc).

Detailed instructions to prepare this year's RSIA submission will be sent in the official callout, in about 2 weeks.

Mid-year update:

The following documents are attached (and are available on the regional drive under the folder "CSAP"):
These documents identify what we communicated to RMC last year, and what is the status.

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- Summary of progress on proposed schedule (approved by RMC); summary of products to-date; including additional unexpected requests (2018-19 MidYear update schedule.pdf)
- Update for requests identified as achievable (2018-19 MidYear update achievables.pdf)
- Update for requests identified as uncertain (2018-19 Midyear update uncertains.pdf)

If you would like me to talk directly to your group about science requests, planning, the Canadian Science Advisory Secretariat and peer review processes, RSIA reviews etc. please contact me.

Thank you,
Lesley

Lesley MacDougall BSc, MMM, RPBio

Science Coordinator | Gestionnaire scientifiques

Centre for Science Advice | Centre des avis scientifiques
Pacific Region | Région du Pacifique
Pacific Biological Station | Station biologique du pacifique
Nanaimo, B.C. V9T 6N7 | Nanaimo (CB) V9T 6N7

PHONE #: 250-756-7088
lesley.macdougall@dfo-mpo.gc.ca

Pages 3726 to / à 3730
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pages 3270 to / à 3274

s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Brekke, Heather
Sent: August-27-18 4:23 PM
To: Malikian, Janine
Cc: Jones, Lisa Ann
Subject: RE: FOR REVIEW: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)
Attachments: NR_AmendedRecoveryStrategy_RKW_hb.docx

Hi Janine,

Please see some suggested changes attached. I [redacted]

Thanks
Heather

From: Malikian, Janine
Sent: August-27-18 4:03 PM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: FOR REVIEW: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)

Hi Heather,

I know you're super busy, but this shouldn't take a lot of your time, hopefully.

For your review: quick draft of News Release based on the Media Lines.

It would be great if you could get back to me today as NHQ wants the draft tomorrow morning, and Cheryl should see it too …

Thanks,

Janine

From: Brekke, Heather
Sent: August-27-18 2:40 PM
To: Malikian, Janine
Cc: Jones, Lisa Ann
Subject: RE: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)

Hi Janine,

[redacted]

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s.21(1)(a)

s.21(1)(b)

Cheers,
Heather

From: Malikian, Janine
Sent: August-27-18 2:17 PM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: FW: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)
Importance: High

Hi Heather,

[redacted]

Thanks,

Janine

From: Smith, Kathleen
Sent: August-27-18 1:56 PM
To: Malikian, Janine; Girouard, Louise
Cc: Hubley, Marian; Parkes, Sara; Fagan, Ashley; Payne, Matthew
Subject: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)
Importance: High

Hi Janine/Louise,

[redacted]

Pls confirm,
Thanks!

Kathleen Smith
A/Manager Communications / Gestionnaire p-i
Aquatic Ecosystems Sector / Équipes du Secteur des écosystèmes aquatiques

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(613) 990-0636 (office-bureau) / [redacted] Blackberry)
Fisheries and Oceans Canada / Pêches et Océans Canada

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s.21(1)(a)

s.21(1)(b)

Dozie, Juachi

From: Brekke, Heather
Sent: August-27-18 3:10 PM
To: Stewart, Julie
Cc: Busby, Corina
Subject: RE: SRKW
Attachments: RE: Enhanced consultations for amended SRKW critical habitat

Hi Julie and Corina,

As a heads up – our region has been asked to develop a consultation plan to support more in-person meetings within this 60-day comment period. Details are attached, but upon regional approval, we would be looking at:

- Letters
- 2 Webinars (one for Indigenous/Tier 1, one general/stakeholder)
- 2 in-person meetings (locations likely Port Alberni and Victoria)
- FN Bilaterals, as requested (but also: Maa Nulth, Pacheedaht, Ditidaht)
- Presentations at regularly scheduled fishing advisory board and AAROM meetings, opportunistically

Please let me know if you have any questions or concerns.

Best
Heather

From: Stewart, Julie
Sent: August-27-18 2:24 PM
To: Morel, Philippe
Cc: Richter, Julie; Busby, Corina; Brekke, Heather; Smith, Kathleen; Davis, Neil; Brekke, Heather; Thorleifson, Erika; Khanna, Sukriti
Subject: RE: SRKW

Philippe:

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[redacted]

Julie Stewart
Director / Directrice
Species at Risk Program / Programme des Espèces en Péril
200 rue Kent St.
Station 10W061
Ottawa, ON
K1A 0E6

(613) 949-7524 (t)
[redacted](c)

Julie.stewart@dfo-mpo.gc.ca

From: Morel, Philippe
Sent: Monday, August 27, 2018 4:23 PM
To: Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>
Cc: Richter, Julie <Julie.Richter@dfo-mpo.gc.ca>
Subject: TR: SRKW
Importance: High

Julie

[redacted]

Philippe

De : Blewett, Catherine
Envoyé : 27 août 2018 15:34
À : Morel, Philippe <Philippe.Morel@dfo-mpo.gc.ca>; Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>; Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>
Cc : Kahn, Zoe <Zoe.Kahn@dfo-mpo.gc.ca>
Objet : Fw: SRKW
Importance : Haute

Colleague,

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[redacted]

Thanks for your help.
C
Sent from my BlackBerry 10 smartphone on the Bell network.

From: catherine.blewett@dfo-mpo.gc.ca
Sent: Monday, August 27, 2018 4:07 PM
To: Young, George
Cc: Butcher, Ashley
Subject: Re: SRKW

George

[redacted]

Merci

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Young, George
Sent: Monday, August 27, 2018 3:57 PM
To: Blewett, Catherine
Cc: Butcher, Ashley
Subject: SRKW

Good afternoon Deputy,

[redacted]

s.21(1)(a)
s.21(1)(b)

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[redacted]

Regards,
George Young

Acting-Chief of Staff / Chef de cabinet par intérim
Office of the Hon. Jonathan Wilkinson / Bureau de L'hon Jonathan Wilkinson
Minister of Fisheries, Oceans and the Canadian Coast Guard /
Ministre des Pêches, des Océans et de la Garde côtière canadienne

T : 613-992-3474

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s.21(1)(a)

s.21(1)(b)

Dozie, Juachi

From: Brekke, Heather
Sent: August-27-18 8:39 AM
To: Johansen, Jeff
Subject: RE: RKW aRS - need direction from Andy
Attachments: RKW Consultation Plan_DraftAug23.docx

Forgot to attach the consultation plan.

From: Brekke, Heather
Sent: August-27-18 8:24 AM
To: Johansen, Jeff
Subject: RKW aRS - need direction from Andy

Hi Jeff,

Neil asked that we get you to seek direction from Andy on two things this morning [redacted]

Thanks
Heather

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

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s.21(1)(a)

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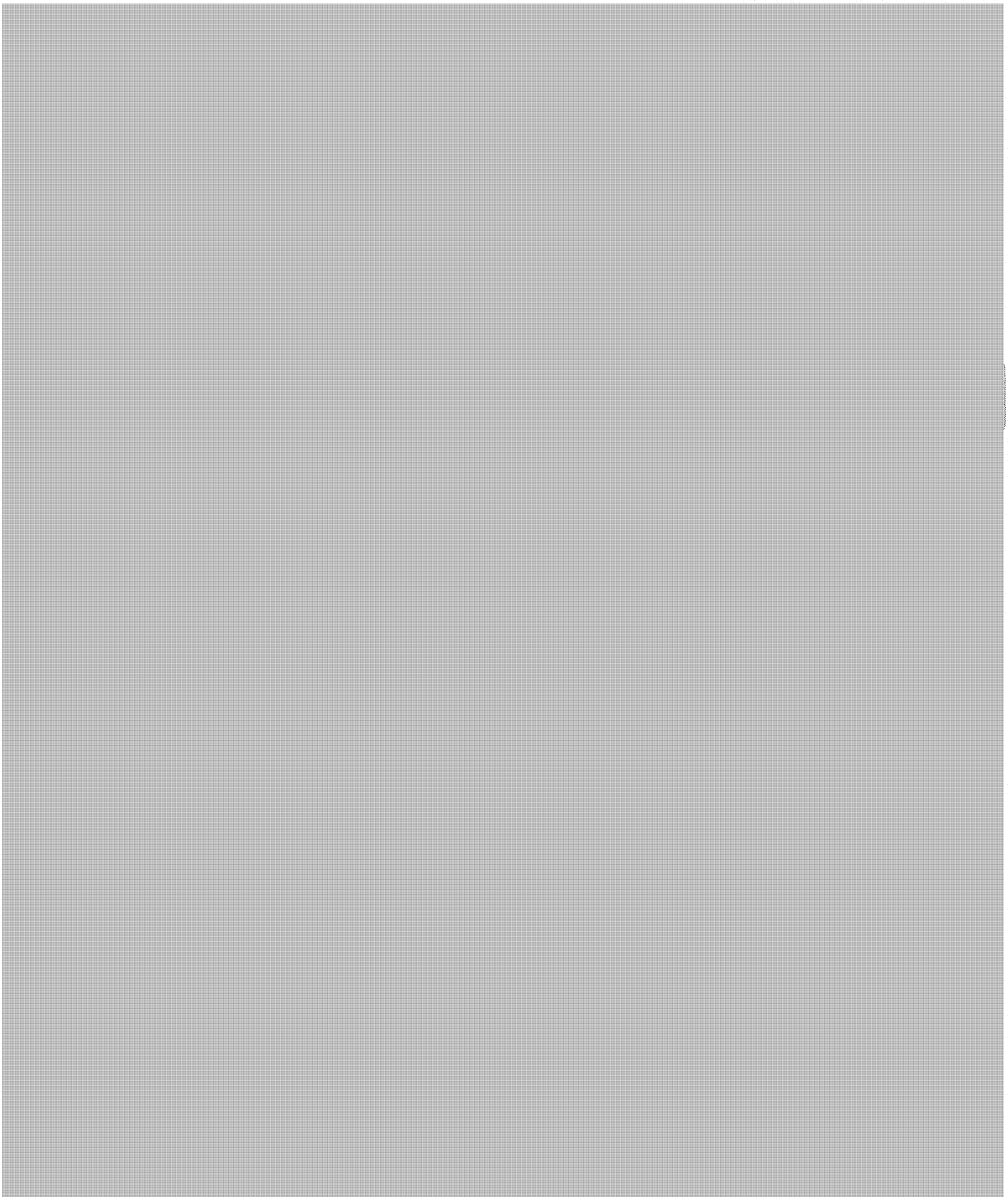
DRAFT CONSULTATION PLAN



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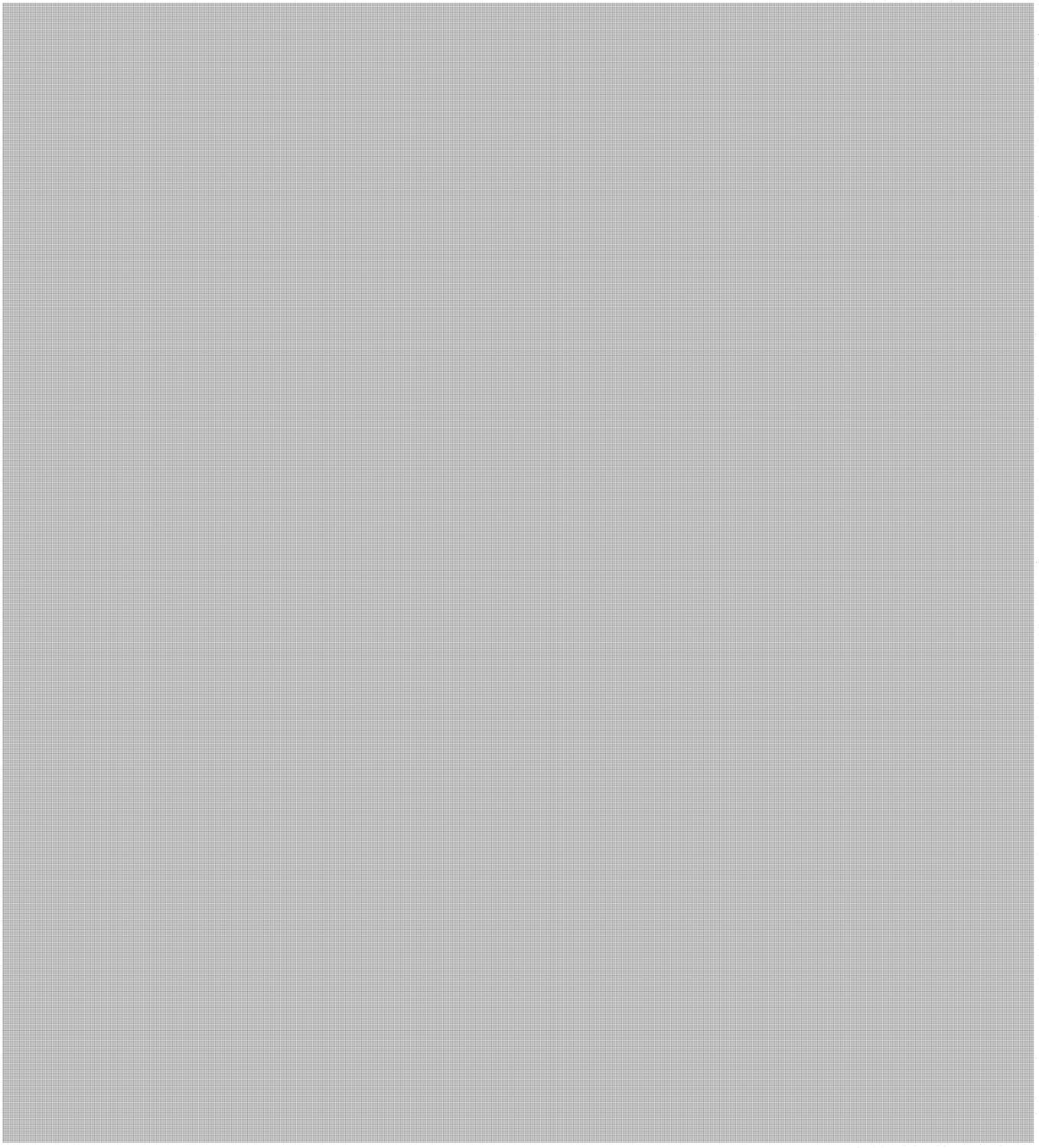

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Wong, Eva

From: Malikian, Janine
Sent: August-27-18 4:03 PM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: FOR REVIEW: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)
Attachments: NR_AmendedRecoveryStrategy_RKW.docx

Hi Heather,

I know you're super busy, but this shouldn't take a lot of your time, hopefully.

For your review: quick draft of News Release based on the Media Lines.

It would be great if you could get back to me today as NHQ wants the draft tomorrow morning, and Cheryl should see it too ...

Thanks,

Janine

From: Brekke, Heather
Sent: August-27-18 2:40 PM
To: Malikian, Janine
Cc: Jones, Lisa Ann
Subject: RE: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)

Hi Janine,

Cheers,
Heather

From: Malikian, Janine
Sent: August-27-18 2:17 PM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: FW: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)
Importance: High

Hi Heather,

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[redacted]

Thanks,

Janine

From: Smith, Kathleen
Sent: August-27-18 1:56 PM
To: Malikian, Janine; Girouard, Louise
Cc: Hubley, Marian; Parkes, Sara; Fagan, Ashley; Payne, Matthew
Subject: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)
Importance: High

Hi Janine/Louise,

[redacted]

Pls confirm,
Thanks!

Kathleen Smith
A/Manager Communications / Gestionnaire p-i
Aquatic Ecosystems Sector / Équipes du Secteur des écosystèmes aquatiques

(613) 990-0636 (office-bureau) / [redacted] **(Blackberry)**
Fisheries and Oceans Canada / Pêches et Océans Canada

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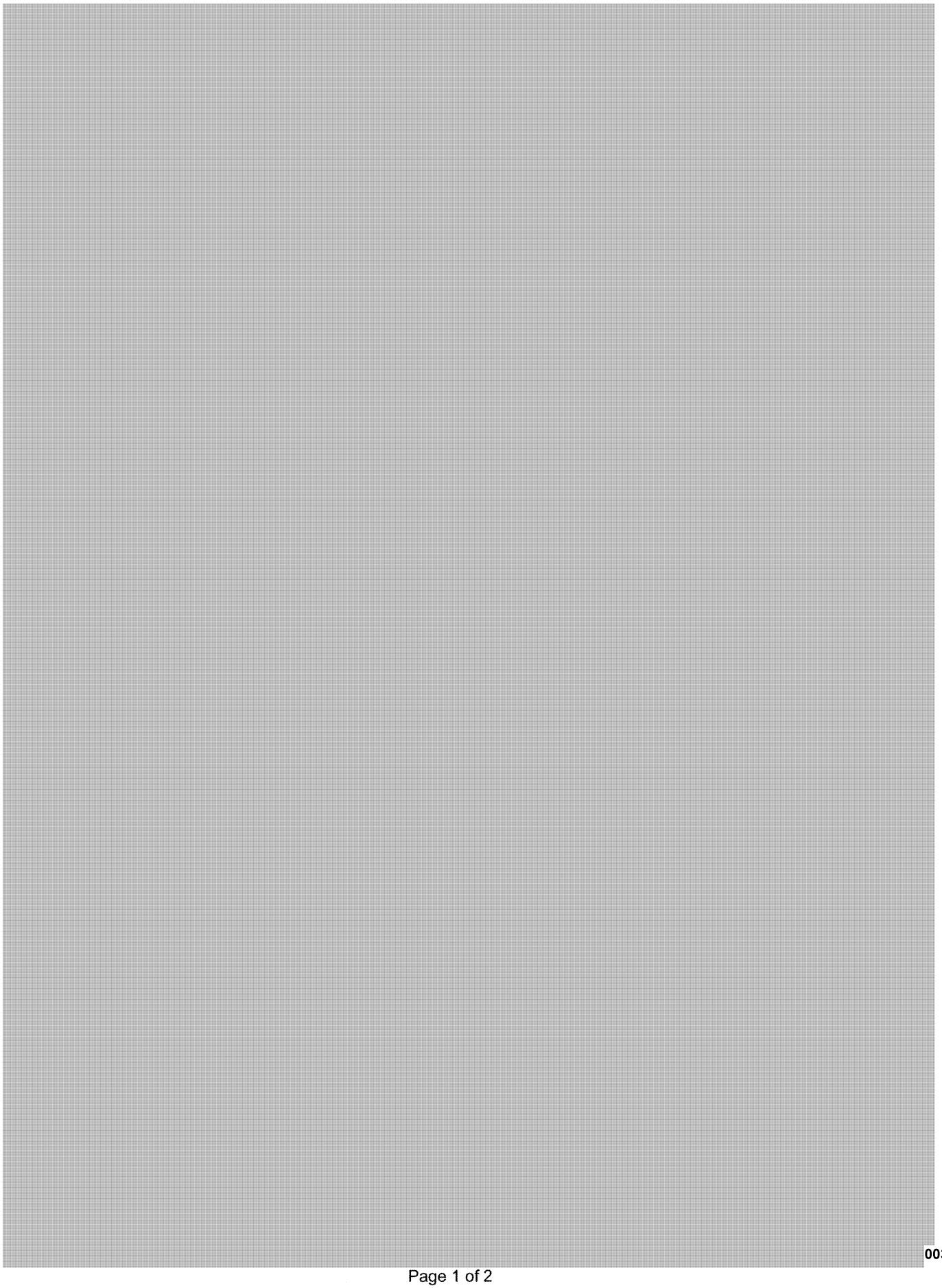
News Release



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s.21(1)(b)

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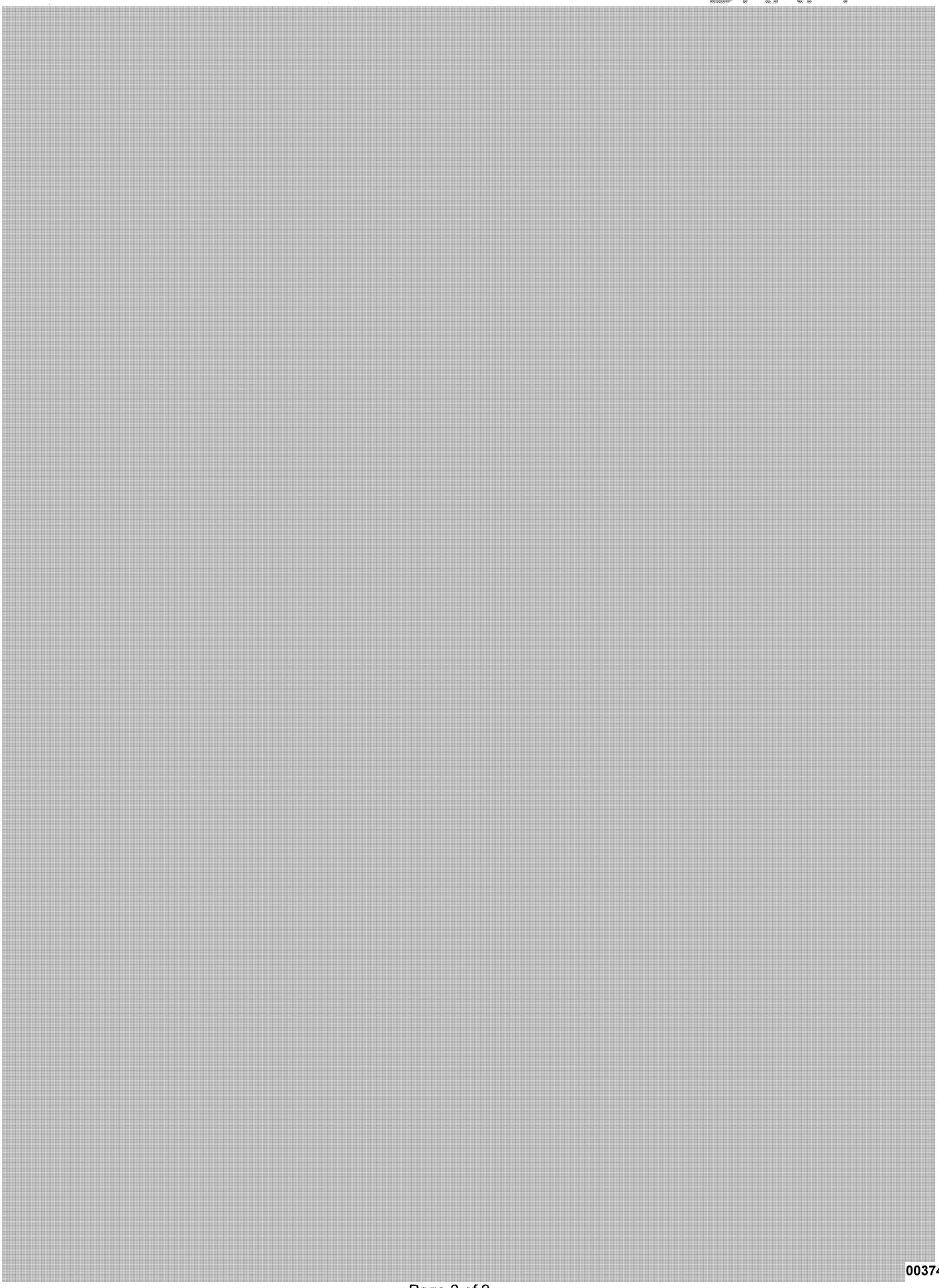

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s.69(1)(g) re: (e)
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Khanna, Sukriti

From: Brekke, Heather
Sent: August-27-18 11:00 AM
To: Scott, Paul G
Subject: RE: Call this afternoon
Attachments: [redacted]

Hi Paul,

We in the Pacific region are calling [redacted] It's attached in the meeting invite, and again here.

From: Scott, Paul G
Sent: August-27-18 10:41 AM
To: Brekke, Heather
Subject: Call this afternoon

Hi Heather,

Just going through your material for the call. [redacted] s this something that Nick's group produced?

Thanks very much

Paul

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

REVIEW:

Name of Reviewer (Affiliation): The Province of British Columbia - Charlie Short (Ministry of Forest, Lands, Natural Resource Operations and Rural Development [FLNR]); Ron Ptolemy (Ministry of Environment and Climate Change Strategy [ENV)]); Karen Stefanyk (ENV); Ben Clark & Amber Mattock (Tourism Branch, Ministry of Tourism, Arts and Culture [TAC]); Stephen Ban (BC Parks, [ENV]); Alanya Smith (Ministry of Indigenous Relations and Reconciliation [MIRR]), Larry Neilson and Michael Turner on (on behalf of the Ministry of Agriculture [AGRI])

Date of Review: July 18, 2018

General Comments:

- B.C. commends the federal government for their efforts to address the destruction of critical habitat for RKW
- Consistent with our bilateral conversations through the Oceans Coordinating Committee (OCC) and the Regional Committee on Oceans Management (RCOM), and other BC/DFO venues, B.C. requests that the federal government continue to engage with us on initiatives related to Southern RKW and ensure the opportunity to provide feedback in a meaningful way is provided.
- The Province of British Columbia and its associated Ministries would like to stay informed regarding the research underway, so we can proactively work with our industry stakeholders and the public to anticipate any changes in operating procedures or regulations that may result from the research findings.

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s.21(1)(a)
s.21(1)(b)

Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review
SPECIFIC COMMENTS

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
Charles Short [FLNR]	s. 7	Cumulative impacts of activities that may affect critical habitat components are not discussed enough or at all – this is an important consideration given the amount current and historical impacts to KW habitat. a. Refinement of mitigation measures spatially would benefit from more comprehensive cumulative impacts type analyses.		
Charles Short	s. 7	Access to rubbing beaches are identified as a key function for NRKWs in		

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
[FLNR]		identified critical habitat yet they can be discretely spatially identified – why not be more explicit on location. It seems that legal protection for identified sites with specific regulations would be most effective in these areas and could be implemented on a priority basis.		
Charles Short [FLNR]	s. 7	Prey availability is another element of critical habitat that is clearly a high priority although only fishing is explicitly identified as a threat. Would be more useful to itemize all activities that are detrimental to salmon habitat, population units / stocks, by species and area. Mitigation and protective measure would be more easily identified and implemented.		
Charles Short [FLNR]	s. 7	Limited identification of terrestrial impacts to critical aquatic habitat – unclear as to what the extent of potential impacts of implementing the recovery strategy would be in this regard (e.g., forestry, urban planning and effluent regulations, shoreline / coastal development, tourism)		

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SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
Charles Short [FLNR]	s. 7	Given that SRKW identified critical habitat is in the most impacted, heavily populated and intensely utilized marine environment in the province that all identified features, functions and attributes (except rubbing beaches) exist it may be useful to prioritize areas within to assist in implementation and mitigate impacts to socio-economic values that would be identified as impacting (i.e., destroying) aquatic critical habitat as defined.		

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Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
Ronald A. Ptolemy, R.P.Bio.	s 7	Last review by Ptolemy completed in 2008 with stated concerns over unknown weighting by stressor to the persistence of healthy populations. Table 6 (current draft) is a good start to identifying stressors but is incomplete and has no science weighting as to what is really important to act on.		
Ronald A. Ptolemy, R.P.Bio.	s 7	There is no indication of the relative risk of various stressors between the Northern and Southern populations. For example if the Northern population is classed as healthier than the Southern population in terms of reproductive rate or mortality rate, both populations are subject to marine noise conditions so is under-water noise a common characteristic that is of lower concern for mitigative actions? Johnstone Strait is a very noisy place with many outboard motors operating as detected through hydrophones each year. Any noisier than Strait of Juan de Fuca or Puget Sound?		

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
Ronald A. Ptolemy, R.P.Bio.	s 7	If legal approach distances (200m) are the same during the busy summer months for both groups of Orca, is distance constraints a big issue?		
Ronald A. Ptolemy, R.P.Bio.	s 7	It seems autopsy reports of dead Orca from the Southern Population Group show high levels of toxins and contaminants more so than for Northern Population, why does Table 6 not address this important issue. Providing more forage fish (chinooks and chum) may not be a holistic solution.		

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SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
Ronald A. Ptolemy, R.P.Bio.		Is there a simple graphic that shows aerial frequency (use of drones) of poorly conditioned Orca differences between the two target groups? Could not find this information in the supplied material.		
Ronald A. Ptolemy, R.P.Bio	S 7	What efforts are being made to manage chinook fisheries to ensure sufficient spawner numbers are available to fill the freshwater capacity of rivers used by the salmon species for reproduction and rearing? This is not captured well in Table 6.		
AGRI	General	There are potential implications for the Province, specifically around environmental contaminants, nearshore use (planning, industrial development), tourism and recreational fishing and shipping/ports		

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s.21(1)(a)
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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
AGRI	General	AGRI has an interest in the RKW file from a commercial and recreational fisheries perspective. Chinook salmon are the primary food source for southern RKW's and recent recovery measures have led to reductions in fishing opportunities for that species.		
AGRI / ALL	General	As GOC goes forward with planning and implementation of measure to protect SRKW and chinook and chum as prey species, B.C. seeks a clear, and open and transparent consultation process with FN, stakeholders and the B.C.		
TAC	General	Because whale watching and sport fishing are tourism activities that fall under federal jurisdiction, there are limited management implications for the Province with respect to tourism specifically. Where the Province could play a proactive role is helping to promote responsible environmental guidelines and operating procedures in these industries. This aligns well with other work being done with the Adventure Tourism Coalition members with respect to heli-skiing and bear viewing. Many whale watching operators on the B.C. coast are part of the Pacific Whale	Low – FYI	

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s.21(1)(a)
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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

Reviewer	Section and/or Line # of Recovery Strategy	Specific Comment	Priority	Pacific Species at Risk Program Response
		Watch Association – here are their voluntary guidelines: https://www.pacificwhalewatchassociation.com/guidelines/		
TAC	General – on-going communications	[The BC Government] Tourism Branch would like to stay informed regarding the research underway, so we can proactively work with our industry stakeholders and the public to anticipate any changes in operating procedures or regulations that may result from the research findings.	Low – Communication	
TAC	Socio-economic impact assessment	Southern Vancouver Island is a popular tourism destination for whale watching and restrictions could have economic impacts on the businesses operating within critical habitat areas. The 200 meter restriction will impact business operations and visitor experience – of which whale watching is a key motivating factor to trip planning in B.C.		
TAC		***Question:*** Are there opportunities for whale watching operators to get closer than 200 meters if they use alternate sources of power?		
BC Parks		**RE: Potential Management Implications in Robson Bight** 1) Even though it's a designated ecological reserve, the [P]rovince has no authority or enforcement powers to prevent vessels (powered or not) from entering the reserve. For this and other joint provincial-federal initiatives, having a		

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s.21(1)(a)
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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

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		Memorandum of Understanding (MoU) allowing provincial staff to enforce areas of federal jurisdiction would be a great step forward. [*The Province did note that there is a warden program in place that educates people in the area*]. 2) DFO itself continues to conduct test fisheries in and around the reserve waters, which at the very least looks terrible from a public relations standpoint even if it doesn't materially affect prey availability.		
Alanya Smith [MIRR]	General – First Nations Consultations	[In reviewing the amended recovery strategy and materials provided] there is no explicit mention of engagement that the federal government may have undertaken with Indigenous communities and governments with territories on the coast. B.C. is aware of the strong interests that coastal First Nations have in the health of the marine environment. In consideration of Canada and B.C.'s commitments to implement the UN Declaration on the Rights of Indigenous Peoples, B.C. encourages the federal government to undertake meaningful engagement with coastal First Nations in the development of the amended recovery strategy and in the communication of its final form and around its implementation.		

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
SARCC Review

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Date of Review: July 12, 2018

General Comments:

NOTE THIS IS PRECEEDING BC's OFFICIAL RESPONSE

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Amended Recovery Strategy for Northern and Southern Resident Killer Whales in Canada
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Charles Short [FLNR]	s. 7	2. Access to rubbing beaches are identified as a key function for NRKWs in identified critical habitat yet they can be discretely spatially identified – why not be more explicit on location. It seems that legal protection for identified sites with specific regulations would be most effective in these areas and could be implemented on a priority basis.		
Charles Short [FLNR]	s. 7	3. Prey availability is another element of critical habitat that is clearly a high priority although only fishing is explicitly identified as a threat. Would be more useful to itemize all activities that are detrimental to salmon habitat, population units / stocks, by species and area. Mitigation and protective measure would be more easily identified and implemented.		
Charles Short [FLNR]	s. 7	4. Limited identification of terrestrial impacts to critical aquatic habitat – unclear as to what the extent of potential impacts of implementing the recovery strategy would be in this regard (e.g., forestry, urban planning and effluent regulations, shoreline / coastal development, tourism)		
Charles Short [FLNR]	s. 7	5. Given that SRKW identified critical habitat is in the most impacted, heavily populated and intensely utilized marine environment in the province that all identified features, functions and attributes (except rubbing beaches) exist it may be useful to prioritize areas within to assist in implementation and mitigate impacts to socio-economic		

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		values that would be identified as impacting (i.e., destroying) aquatic critical habitat as defined.		
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Ronald A. Ptolemy, R.P.Bio.	s 7	• If legal approach distances (200m) are the same during the busy summer months for both groups of Orca, is distance constraints a big issue?		
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Pages 3759 to / à 3782

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69(1)(g) re: (e), 69(1)(g) re: (a)

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Pages 3783 to / à 3785

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pages 3763 to / à 3765

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Khanna, Sukriti

From: Ruth Howell - NOAA Federal [redacted]
Sent: August-27-18 6:55 PM
To: Giles
Cc: Nollens, Hendrik; Kristin Wilkinson - NOAA Federal; brad.hanson; Jeff Foster; Katy Foster; Joe Gaydos; Marty Haulena; Jennifer Olson; Taylor Shedd; Jim McBain; Candice Emmons; Jenny Atkinson; Lynne Barre; Teri Rowles; Sarah Wilkin - NOAA Federal; John Durban - NOAA Federal; Cottrell, Paul; Thornton, Sheila; Chris Yates - NOAA Federal; Mike Ford - NOAA Federal
Subject: Re: [EXTERNAL] Response Capacity 8/30-9/5

Kristin and all,

Thank you for this update. We continue to get interest from the avid followers on social media and a few highly engaged reporters. During the 'pause' we'll plan to release updates from those on the water as they come in, so please keep me, Michael, and Jim apprised of any sightings, sample results, or samples collected related to the J50 response. This will help feed the need for information until the team returns to the water.

Thanks all,

Ruth

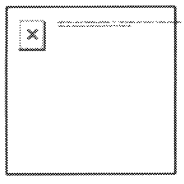
On Mon, Aug 27, 2018 at 2:19 PM, Giles [redacted] wrote:
Hello All,

I will continue to be on the water everyday with the whales, documenting behavior, taking photos and hopefully collecting fecal samples and will share our findings with the group on a daily basis if/when they come back.

Giles

~ ~ ~ ~ ~ ~ ~ ~ ~
Deborah A. Giles, PhD
Science and Research Director, Wild Orca
Research Technologist ~ UW Center for Conservation Biology
Resident Scientist ~ University of Washington Friday Harbor Labs
(916) 531-1516

Wildorca.org



On Mon, Aug 27, 2018 at 1:33 PM, Nollens, Hendrik [redacted] wrote:

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Hi Kristin,

It is what it is, right? We all have day jobs ☺ Is there any chance we can ask other experienced observers such as Dave Ellifrit or Ken Balcomb to get their subjective opinion of her, should the pod be in range during that period?

Thank you,

--HN.

From: Kristin Wilkinson - NOAA Federal [mailto:
Sent: Monday, August 27, 2018 1:24 PM
To: brad.hanson; Jeff Foster; Katy Foster; Joe Gaydos; Marty Haulena; Nollens, Hendrik; Jennifer Olson; Taylor Shedd; Jim McBain; Candice Emmons; Jenny Atkinson; Deborah Giles, PhD
Cc: Ruth Howell; Lynne Barre; Teri Rowles; Sarah Wilkin - NOAA Federal; John Durban - NOAA Federal; Cottrell, Paul; Sheila Thornton; Chris Yates - NOAA Federal; Mike Ford - NOAA Federal
Subject: [EXTERNAL] Response Capacity 8/30-9/5

Hello All,

We will have a temporary pause in our on water emergency response capacity for J50 between Thursday, August 30th and Wednesday, September 5th. Brad is off island preparing for their upcoming September field season, Candi is out of town, and Jeff and Katy need to leave the island
With Brad, Candi, and Jeff being the most experienced vessel operators in close distance to SRKW we will temporarily pause our on water efforts to administer medical treatment. If SeaDoc would like to monitor her overall condition and document from a distance that is a possibility and our partners (UW, Soundwatch, DFO, etc.) will continue to provide information as available.

Our goals continue to be;

1. Administer a full dose of Covenia (antibiotic) in U.S. or Canadian waters

2. Administer one dose of Ivermectin (dewormer) in U.S. or Canadian waters

3. Compare photogrammetry images from August 1st to next available images collected by SWFSC - U.S. waters

4. Opportunistically collect samples from J50

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s.19(1)

Please let me know if you have any questions or concerns about this temporary pause in operations or if you have additional resources (such as experienced vessel operators) please feel free to bring them to my attention.

A huge thank you to the entire team for all of their efforts, time, and energy put towards this case to date.

--

Kristin Wilkinson
NOAA Fisheries, Protected Resources Division

West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office

[redacted] Cell

--

Ruth Howell
Branch Chief for Communications and External Affairs
NOAA Fisheries West Coast Region
[redacted]
206.526.4741 (w)
[redacted] c)

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Khanna, Sukriti

From: Nollens, Hendrik [redacted]
Sent: August-27-18 9:19 PM
To: Giles
Cc: Kristin Wilkinson - NOAA Federal; brad.hanson; Jeff Foster; Katy Foster; Joe Gaydos; Marty Haulena; Jennifer Olson; Taylor Shedd; Jim McBain; Candice Emmons; Jenny Atkinson; Ruth Howell; Lynne Barre; Teri Rowles; Sarah Wilkin - NOAA Federal; John Durban - NOAA Federal; Cottrell, Paul; Thornton, Sheila; Chris Yates - NOAA Federal; Mike Ford - NOAA Federal
Subject: RE: [EXTERNAL] Response Capacity 8/30-9/5

Thank you Giles. Your assessment of whether she is worsening, stabilizing or getting stronger will help prioritize treatment attempts.
--HN.

From: Giles [redacted]
Sent: Monday, August 27, 2018 2:20 PM
To: Nollens, Hendrik
Cc: Kristin Wilkinson - NOAA Federal; brad.hanson; Jeff Foster; Katy Foster; Joe Gaydos; Marty Haulena; Jennifer Olson; Taylor Shedd; Jim McBain; Candice Emmons; Jenny Atkinson; Ruth Howell; Lynne Barre; Teri Rowles; Sarah Wilkin - NOAA Federal; John Durban - NOAA Federal; Cottrell, Paul; Sheila Thornton; Chris Yates - NOAA Federal; Mike Ford - NOAA Federal
Subject: Re: [EXTERNAL] Response Capacity 8/30-9/5

Hello All,

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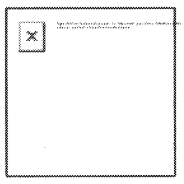
Giles

~ ~ ~ ~ ~ ~ ~ ~ ~

Deborah A. Giles, PhD
Science and Research Director, Wild Orca
Research Technologist ~ UW Center for Conservation Biology
Resident Scientist ~ University of Washington Friday Harbor Labs
(916) 531-1516

Wildorca.org



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Cc: Ruth Howell; Lynne Barre; Teri Rowles; Sarah Wilkin - NOAA Federal; John Durban - NOAA Federal; Cottrell, Paul; Sheila Thornton; Chris Yates - NOAA Federal; Mike Ford - NOAA Federal
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1. Administer a full dose of Covenia (antibiotic) in U.S. or Canadian waters

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Please let me know if you have any questions or concerns about this temporary pause in operations or if you have additional resources (such as experienced vessel operators) please feel free to bring them to my attention.

A huge thank you to the entire team for all of their efforts, time, and energy put towards this case to date.

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Kristin Wilkinson
NOAA Fisheries, Protected Resources Division

West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office

[redacted] Cell

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Khanna, Sukriti

From: John Durban - NOAA Federal [redacted]
Sent: August-27-18 2:16 PM
To: Kristin Wilkinson - NOAA Federal
Cc: brad hanson; Jeff Foster; Katy Foster; Joe Gaydos; Marty Haulena; Hendrik Nollens; Jennifer Olson; Taylor Shedd; Jim McBain; Candi Emmons; Jenny Atkinson; Deborah Giles, PhD; Ruth Howell - NOAA Federal; Lynne Barre; Teri Rowles; Sarah Wilkin - NOAA Federal; Cottrell, Paul; Thornton, Sheila; Chris Yates - NOAA Federal; Mike Ford; Holly Fearnbach
Subject: Re: Response Capacity 8/30-9/5

Hi Kristin,

Thanks for keeping me in the loop. Together with my colleagues from SR3 (Holly Fearnbach lead, ccd here) we will begin SRKW photogrammetry again from September 3rd - 30th. We aim to spread our monitoring coverage over the full population, but will of course endeavor to collect new images of J50 as soon as possible, and periodically across the month. If/when we get updated images of J50, Holly will produce a set of repeat photogrammetry measurements and we can provide a quantitive update on condition asap.

Thanks, John
- - - -

John W. Durban, Ph.D.

Leader, Cetacean Health and Life History Program
NOAA Southwest Fisheries Science Center
8901 La Jolla Shores Drive, La Jolla, CA 92037
Tel. 858-334-2866

https://swfsc.noaa.gov/MMTD-CHLHP

On Aug 27, 2018, at 1:23 PM, Kristin Wilkinson - NOAA Federal <[redacted]vrote:

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s.19(1)

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Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-27-18 12:12 PM
To: Cottrell, Paul; Harber, Lee; Scott, Paul G
Subject: RE: SRKW Update Note

Great, thanks for clarifying. Much appreciated.

From: Cottrell, Paul
Sent: Monday, August 27, 2018 3:11 PM
To: Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>
Subject: Re: SRKW Update Note

Hi Kendra,
NOAA's update last night was that they had no update as J-pod has not been seen for three days. I think their response team is on stand-by until J50 observed in in-shore waters. As soon as I hear anything new, I'll let you know.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Moore, Kendra
Sent: Monday, August 27, 2018 11:18 AM
To: Cottrell, Paul; Harber, Lee; Scott, Paul G
Subject: SRKW Update Note

Hi all,

Attached is today's SRKW update note. Thanks to Paul C. for providing the information. If you could review and approve that would be great.

Two quick clarifications, I assume there is no news on NOAA since J-pod is presumed offshore, and any updates on J35?

Thanks so much,

Kendra

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-27-18 11:19 AM
To: Cottrell, Paul; Harber, Lee; Scott, Paul G
Subject: SRKW Update Note
Attachments: MECTS-#3949687-v10-IN-Southern_Resident_Killer_Whale_Update.docx

Hi all,

Attached is today's SRKW update note. Thanks to Paul C. for providing the information. If you could review and approve that would be great.

Two quick clarifications, I assume there is no news on NOAA since J-pod is presumed offshore, and any updates on J35?

Thanks so much,

Kendra

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Southern Resident Killer Whale Update

(August 27, 2018 – 2:15 EDT)

Issues: The deteriorating health condition of Southern Resident Killer Whale (SRKW) J50 of SRKW J-pod has prompted the U.S. National Oceanic and Atmospheric Administration (NOAA) to propose an emergency action plan to treat her. The response team located J50 on Thursday, August 9th and began sampling and treatment.

Update:

- J-pod was last seen on Friday August 24, 2018 in the afternoon off Sheringham Point heading into offshore waters.
- K-pod and L-pod members were observed off Carmanah, on the west coast of Vancouver Island, on Saturday August 25, 2018.
- Visibility for killer whale observations is poor due to the smoke from BC interior fires.

- DFO issued an amended Authorization to Disturb Marine Mammals to NOAA on Friday August 24th to include the following treatments for J50: anti-parasitic treatment via a pole syringe or remote dart delivery, and the use of collared needles on darts to help the dart adhere to the whale.
    - DFO Science, as well as Dr. Stephen Raverty (provincial marine mammal veterinarian) reviewed the application and concluded the application was justified, as well as including methods that are well tested and including personnel that are experienced.
    - The administration of anti-parasitic treatment has not been attempted, as J50 and J-pod have not been re-sighted since Friday and are presumed to be in offshore waters.
    - Currently, NOAA is authorized to conduct sampling of J50, including breath, fecal, mucus and skin; visual veterinary health assessment; provide antibiotic treatment via pole syringe or remote delivery; anti-parasitic treatment via a pole syringe or remote dart delivery; and the use of collared needles on darts to help the dart adhere to the whale.

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-27-18 7:07 PM
To: Davis, Neil; Thomson, Andrew; Kennedy, Eddy; Thornton, Sheila; MacConnachie, Sean; Sloan, Lara; Girouard, Louise; Greene, Annely; Webb, Cheryl; Doniol-Valcroze, Thomas; Cauffope, Genevieve; Jenkins, Randy; Moore, Kendra
Subject: Fw: Response Capacity 8/30-9/5

Hi All,
NOAA update below. They will be pausing their on-water operations starting Thursday until Wednesday Sept 5th.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Kristin Wilkinson - NOAA Federal
Sent: Monday, August 27, 2018 1:24 PM
To: brad.hanson; Jeff Foster; Katy Foster; Joe Gaydos; Marty Haulena; Hendrik Nollens; Jennifer Olson; Taylor Shedd; Jim McBain; Candice Emmons; Jenny Atkinson; Deborah Giles, PhD
Cc: Ruth Howell; Lynne Barre; Teri Rowles; Sarah Wilkin - NOAA Federal; John Durban - NOAA Federal; Cottrell, Paul; Thornton, Sheila; Chris Yates - NOAA Federal; Mike Ford - NOAA Federal
Subject: Response Capacity 8/30-9/5

Hello All,

We will have a temporary pause in our on water emergency response capacity for J50 between Thursday, August 30th and Wednesday, September 5th. Brad is off island preparing for their upcoming September field season, Candi is out of town, and Jeff and Katy need to leave the island
With Brad, Candi, and Jeff being the most experienced vessel operators in close distance to SRKW we will temporarily pause our on water efforts to administer medical treatment. If SeaDoc would like to monitor her overall condition and document from a distance that is a possibility and our partners (UW, Soundwatch, DFO, etc.) will continue to provide information as available.

Our goals continue to be;
1. Administer a full dose of Covenia (antibiotic) in U.S. or Canadian waters
2. Administer one dose of Ivermectin (dewormer) in U.S. or Canadian waters
3. Compare photogrammetry images from August 1st to next available images collected by SWFSC - U.S. waters
4. Opportunistically collect samples from J50

Please let me know if you have any questions or concerns about this temporary pause in operations or if you have additional resources (such as experienced vessel operators) please feel free to bring them to my attention.

A huge thank you to the entire team for all of their efforts, time, and energy put towards this case to date.

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division

s.19(1)

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West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

s.20(1)(c)
s.21(1)(a)
s.21(1)(b)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-27-18 8:52 AM
To: Thornton, Sheila; Kennedy, Eddy
Cc: Davis, Neil
Subject: RE: Tracking J-pod

Thanks Sheila,
Sounds reasonable to me. Another week would be great [redacted] I guess we have to find j-pod first (haven't been seen since Friday, heading West from Sheringham/Point no-Point). Lots of variables!
Cheers,
Paul

From: Thornton, Sheila
Sent: August-27-18 8:27 AM
To: Cottrell, Paul; Kennedy, Eddy
Cc: Davis, Neil
Subject: RE: Tracking J-pod

[redacted] The knowledge of movements of the whales from the outer JDF to inland waters is very important for the NOAA and the teams to assist in planning and mobilizing their efforts. In addition, the data add valuable sightings to the JDF study, so it also has some benefit to Science.

The difficulty becomes the slippery slope. Js inhabit these waters year 'round. If it were a K or L animal, we are more secure in our knowledge of the movement patterns, as they leave the Salish Sea later in the fall. I will check in with the NOAA team to see what their thoughts are on this, but if J50 hangs on, we should buckle down for a long ride. As to what Canada's role is – the conditions off Swiftsure won't allow this effort for long.

Cheers,

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Cottrell, Paul
Sent: August-27-18 8:07 AM
To: Kennedy, Eddy
Cc: Thornton, Sheila; Davis, Neil
Subject: RE: Tracking J-pod

Hi Eddy,

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Brian's efforts have been very helpful and provided useful information on the where a bouts of J35 and J50 when J-pod is off-shore. Although the fog/smoke off-shore has made this task very difficult. For the NOAA medication application efforts under way for J50, their work has to be done in in-shore waters because of their limited range/travel time and the difficulty/risks of darting in swell and wind in the off-shore areas (not-withstanding the very poor visibility because of the smoke/fog in off-shore areas, making locating/following individual animals almost impossible). Therefore I think it is reasonable that we can monitor J-pod's presence when traveling from off-shore to in-shore waters in Canada through sightings reports and our hydrophone networks. If there is a sudden change in circumstances where J-50 or another SRKW member requires we know their location in off-shore waters [redacted] I think this approach is reasonable. Let me know if you agree.
Cheers,
Paul

From: Kennedy, Eddy
Sent: August-27-18 7:31 AM
To: Cottrell, Paul
Cc: Thornton, Sheila
Subject: Tracking J-pod

Paul,
I am going to need some direction on how long Brian's efforts are going to be required. Although his services are helpful, they are not free [redacted] Can you provide any guidance on the matter.

Thanks
Eddy

s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-27-18 11:07 AM
To: Thornton, Sheila
Subject: RE: Update SRKW

[redacted]

From: Thornton, Sheila
Sent: August-27-18 11:00 AM
To: Cottrell, Paul; Davis, Neil; Thomson, Andrew; Girouard, Louise; Kennedy, Eddy; Lowe, Carmel; Sloan, Lara; Harber, Lee; Webb, Cheryl
Cc: Moore, Kendra; Scott, Paul G; Jenkins, Randy; Greene, Annely
Subject: RE: Update SRKW

[redacted]

Regards,

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Cottrell, Paul
Sent: August-27-18 10:56 AM
To: Davis, Neil; Thomson, Andrew; Girouard, Louise; Kennedy, Eddy; Lowe, Carmel; Sloan, Lara; Thornton, Sheila; Harber, Lee; Webb, Cheryl
Cc: Moore, Kendra; Scott, Paul G; Jenkins, Randy; Greene, Annely
Subject: RE: Update SRKW

Hi All,
J-pod has not been sighted since Friday afternoon heading west from Sheringham Point into offshore waters. K and L pod were observed off Carmanah (West Coast of Vancouver Island) Saturday. [redacted] Prey samples collected by Brian Gisborne. DFO Pacific RM issued an amended letter of authorization Friday for NOAA's work authorizing the darting of J-50 to administer anti-parasitic medication in Canadian waters. No darting of J-50 was attempted this weekend as J-50 and J-pod have not been re-sighted since Friday and are presumed to be in off-shore waters.
Cheers,
Paul

s.21(1)(a)
s.21(1)(b)
Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Cottrell, Paul
Sent: August-24-18 12:56 PM
To: Davis, Neil; Thomson, Andrew; Girouard, Louise; Kennedy, Eddy; Lowe, Carmel; Sloan, Lara; Thornton, Sheila; Harber, Lee; Webb, Cheryl
Cc: Moore, Kendra; Scott, Paul G; Jenkins, Randy; Greene, Annely
Subject: RE: Update SRKW

Hi All,
J-pod was not sighted yesterday in in-shore waters or by our DFO vessel in off-shore waters (ie off the West Coast of Vancouver Island). No sightings yet of J-pod today.
Cheers,
Paul

From: Cottrell, Paul
Sent: August-23-18 8:28 AM
To: Davis, Neil; Thomson, Andrew; Girouard, Louise; Kennedy, Eddy; Lowe, Carmel; Sloan, Lara; Thornton, Sheila; Harber, Lee; Webb, Cheryl
Cc: Moore, Kendra; Scott, Paul G; Jenkins, Randy; Greene, Annely
Subject: Update SRKW

Hi All,
K and L pod members were located off-shore on the West Coast of Vancouver Island yesterday in the smoke and fog and followed from 14:00-18:00. Visability was 150 m. J-pod was not located yesterday but believed to still be in off-shore waters. No sightings of SRKW in in-shore waters yesterday.
Cheers,
Paul

From: Cottrell, Paul
Sent: August-22-18 8:48 AM
To: Jenkins, Randy; Davis, Neil; Harber, Lee
Cc: Moore, Kendra; Scott, Paul G
Subject: Re: SRKW J-50

Thanks Randy,
As an update, just received information from DFO contractor working off the West Coast of Vancouver Island (ie through DFO science) that J50 was seen with mom last night at 6:45 PM off Carmanah Point traveling toward Nitinat. It was a super pod so, J, K and L pods were all present. J16 mom was observed foraging and close with J50.
When are we hiring for the hubs and getting new staff in place as it is much needed asap. I hope this is a priority action. The summer is going fast...
As I mentioned, updates from all the potential sources of information (eg whale watch industry, NOAA, DFO CP, DFO RM, DFO science, NGO's, Straitwatch, researchers, commercial vessels, cetacean sightings network, etc) are not always real time and sometimes the information is received next day. It is a big ocean out here and with the fog/smoke it has made locating whales when offshore very difficult. The trans-boundary nature of the movements further complicates things. Often only a small portion of a SRKW pod are seen (ie not all members of a pod are observed). This includes J50 and J35. Hope this is useful context.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

s.21(1)(a)
s.21(1)(b)
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From: Jenkins, Randy
Sent: Wednesday, August 22, 2018 6:44 AM
To: Cottrell, Paul; Davis, Neil; Harber, Lee
Cc: Moore, Kendra; Scott, Paul G
Subject: RE: SRKW J-50

Yes it would be useful for us if the daily info we receive included any and all updates/information/plans from RM, C&P, science, NOAA and anyone else connected to SRKW so that a complete summary can be presented on what the latest information… consolidation and compilation of relevant whale information is something we would envision as a role for the "HUBS" in the future (on both coasts)… for the short term would it be helpful if Kendra developed a short checklist/template where we could capture updates from the various players?

Thanks.
Randy

From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 6:35 PM
To: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: Re: SRKW J-50

Very good point, probably best to have one point source from region to you guys to prevent confusion.

Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Jenkins, Randy
Sent: Tuesday, August 21, 2018 3:26 PM
To: Cottrell, Paul; Davis, Neil
Subject: Re: SRKW J-50

Thanks again,,, I have advised up with your context and that it may be premature to read into lack of J50 sighting.

Very important that we try and have consistent messaging coming into the center. Be useful if Science would advise or collaborate on messaging they are sending to HQ esp if potentially forecasting or suggesting the demise of an animal of interest.

Thanks for your rapid responses.

Randy

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 18:14
To: Davis, Neil
Cc: Jenkins, Randy
Subject: Re: SRKW J-50

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

The animals are in an isolated area on the West Coast of Vancouver Island near Swiftsure Bank. Hopefully this gives you some context.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Cottrell, Paul
Sent: Tuesday, August 21, 2018 3:11 PM
To: Davis, Neil
Cc: Jenkins, Randy
Subject: Re: SRKW J-50

Hi Neil,
The conditions are very poor for veiwing on the water. Just clarified things with Sheila and NOAA. J-pod was seen on Saturday heading west. J-50 was seen at that time by NOAA. Brian Gisborne was on water on Sunday in poor conditions and saw K and L pod and some J's and did not see J50. Due to the conditions it was almost certainly an incomplete count. J50 is known for straying away from the group so not unusual. No sightings yesterday and today as the viewing conditions are very poor. That is the latest I have. There is only a couple 100 meters of visability due to the smoke/fog. Hope this is useful.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Davis, Neil
Sent: Tuesday, August 21, 2018 2:46 PM
To: Cottrell, Paul
Subject: Fw: SRKW J-50

Can you assist?

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>
Sent: Tuesday, August 21, 2018 2:16 PM
To: Davis, Neil; Harber, Lee
Cc: Scott, Paul G; Moore, Kendra
Subject: SRKW J-50

Can someone please confirm the information below (*J50 not sighted past couple days but her mother and others sighted multiple times*)… the last update I had was that J pod was sighted on August 19th. Is it the case that J50 is no longer with the Pod??

I had only earlier this afternoon advised that there wasn't anything new to report today on SRKW and then Science sends this message below to the acting ADM FHM who is now asking for details and whether he should send the DM a heads up on this. Any info would be appreciated.

Thanks.

Randy

From: Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Sent: Tuesday, August 21, 2018 3:52 PM

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To: Landry, Jean; Nadeau, Simon
Cc: Moore, Wayne; Kennedy, Eddy
Subject: Getting ready.....

Two items wrt SRKW J-50:
Please be advised that J50 – the emaciated SRKW – has not been seen for a couple of days now. While way too soon to speculate on possible significance this is noteworthy given that her mother and other pod members have been observed multiple times during this period. There is significant presence on the water and we will advise if there is a update.

Also, FM has submitted an anticipatory request for science advice based on the recent lab analysis results that indicated feces collected from some (unknown) members of the J-Pod contained a parasite and that, as a consequence, NOAA may submit a request for a license amendment to administer parasite treatment in Canadian waters to J50 (if the whale is observed).

Science has begun preliminary work to address both of these issues.
Carmel
Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

s.19(1)
s.21(1)(a)
s.21(1)(b)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-27-18 12:12 PM
To: Thornton, Sheila
Subject: Re: Update SRKW

[redacted]

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Thornton, Sheila
Sent: Monday, August 27, 2018 11:08 AM
To: Cottrell, Paul
Subject: RE: Update SRKW

[redacted]

S

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Cottrell, Paul
Sent: August-27-18 11:07 AM
To: Thornton, Sheila
Subject: RE: Update SRKW

[redacted]

From: Thornton, Sheila
Sent: August-27-18 11:00 AM
To: Cottrell, Paul; Davis, Neil; Thomson, Andrew; Girouard, Louise; Kennedy, Eddy; Lowe, Carmel; Sloan, Lara; Harber, Lee; Webb, Cheryl
Cc: Moore, Kendra; Scott, Paul G; Jenkins, Randy; Greene, Annely
Subject: RE: Update SRKW

[redacted]

Regards,

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s.21(1)(a)

s.21(1)(b)

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

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s.21(1)(a)
s.21(1)(b)

Cheers,
Paul

From: Cottrell, Paul
Sent: August-22-18 8:48 AM
To: Jenkins, Randy; Davis, Neil; Harber, Lee
Cc: Moore, Kendra; Scott, Paul G
Subject: Re: SRKW J-50

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Thanks.
Randy

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Sent: Tuesday, August 21, 2018 6:35 PM
To: Jenkins, Randy <Randy.Jenkins@dfo-mpo.gc.ca>; Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Subject: Re: SRKW J-50

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Subject: Re: SRKW J-50

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Sent: Tuesday, August 21, 2018 18:14
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Cc: Jenkins, Randy
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Cc: Jenkins, Randy
Subject: Re: SRKW J-50

Hi Neil,
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To: Cottrell, Paul
Subject: Fw: SRKW J-50

Can you assist?

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Sent: Tuesday, August 21, 2018 2:16 PM
To: Davis, Neil; Harber, Lee
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Thanks.

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Sent: Tuesday, August 21, 2018 3:52 PM
To: Landry, Jean; Nadeau, Simon
Cc: Moore, Wayne; Kennedy, Eddy
Subject: Getting ready.....

Two items wrt SRKW J-50:
Please be advised that J50 – the emaciated SRKW – has not been seen for a couple of days now. While way too soon to speculate on possible significance this is noteworthy given that her mother and other pod members have been observed multiple times during this period. There is significant presence on the water and we will advise if there is a update.

Also, FM has submitted an anticipatory request for science advice based on the recent lab analysis results that indicated feces collected from some (unknown) members of the J-Pod contained a parasite and that, as a consequence, NOAA may submit a request for a license amendment to administer parasite treatment in Canadian waters to J50 (if the whale is observed).

Science has begun preliminary work to address both of these issues.

Carmel

Carmel Lowe, Ph.D.
Regional Director Science | Directrice régionale des sciences
Fisheries and Oceans Canada | Pêches et Océans Canada
Pacific Biological Station | Station biologique du Pacifique
3190 Hammond Bay Rd, Nanaimo, BC, Canada V9T 6N7
Carmel.Lowe@dfo-mpo.gc.ca
Telephone | Téléphone 250-756-7177
Facsimile | Télécopieur 250-729-8360
Government of Canada | Gouvernement du Canada

s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Thomson, Andrew
Sent: August-27-18 1:49 PM
To: Brekke, Heather
Cc: Davis, Neil; Webb, Cheryl; Nener, Jennifer; Stadel, Angela; Lowe, Carmel
Subject: RE: Enhanced consultations for amended SRKW critical habitat
Attachments: RKW Consultation Plan_DraftAug23.docx

I made some small edits. I intend to send this up as a draft.

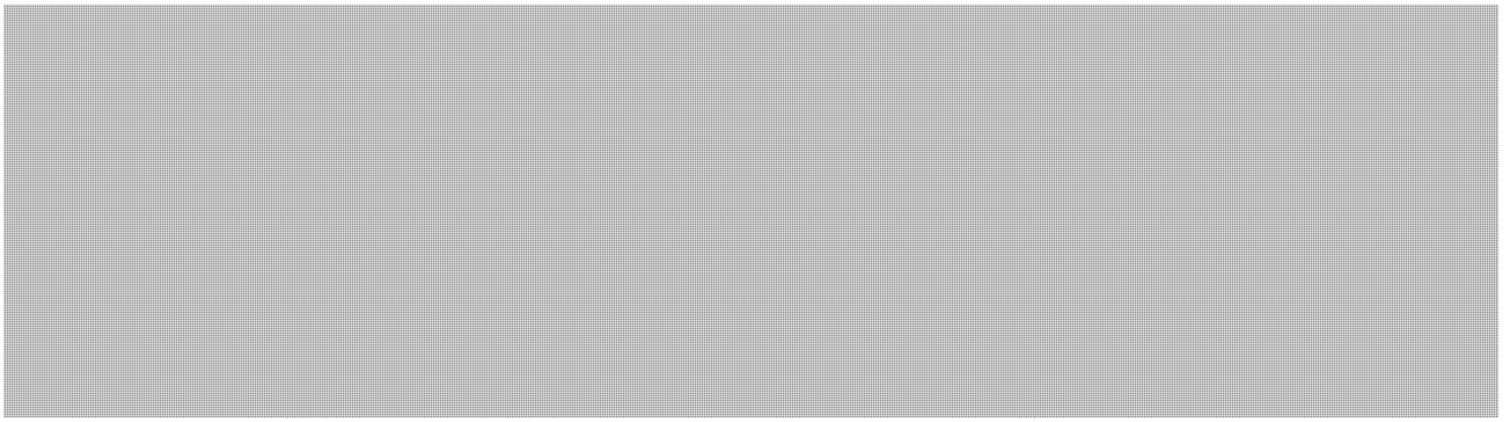
Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

---

From: Brekke, Heather
Sent: Thursday, August 23, 2018 4:31 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Cc: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Nener, Jennifer <Jennifer.Nener@dfo-mpo.gc.ca>; Stadel, Angela <Angela.Stadel@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Subject: RE: Enhanced consultations for amended SRKW critical habitat

Hi Andy,



Please let me know if you have any questions.

Thank you,
Heather

From: Thomson, Andrew
Sent: Wednesday, August 22, 2018 11:24 AM

s.21(1)(a)
s.21(1)(b)
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To: Davis, Neil <Neil.Davis@dfo-mpo.gc.ca>
Cc: Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>; Nener, Jennifer <Jennifer.Nener@dfo-mpo.gc.ca>; Stadel, Angela <Angela.Stadel@dfo-mpo.gc.ca>; Lowe, Carmel <Carmel.Lowe@dfo-mpo.gc.ca>
Subject: Enhanced consultations for amended SRKW critical habitat

Andrew J L Thomson
Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada
Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada

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s.21(1)(a)

s.21(1)(b)

DRAFT CONSULTATION PLAN

[redacted]

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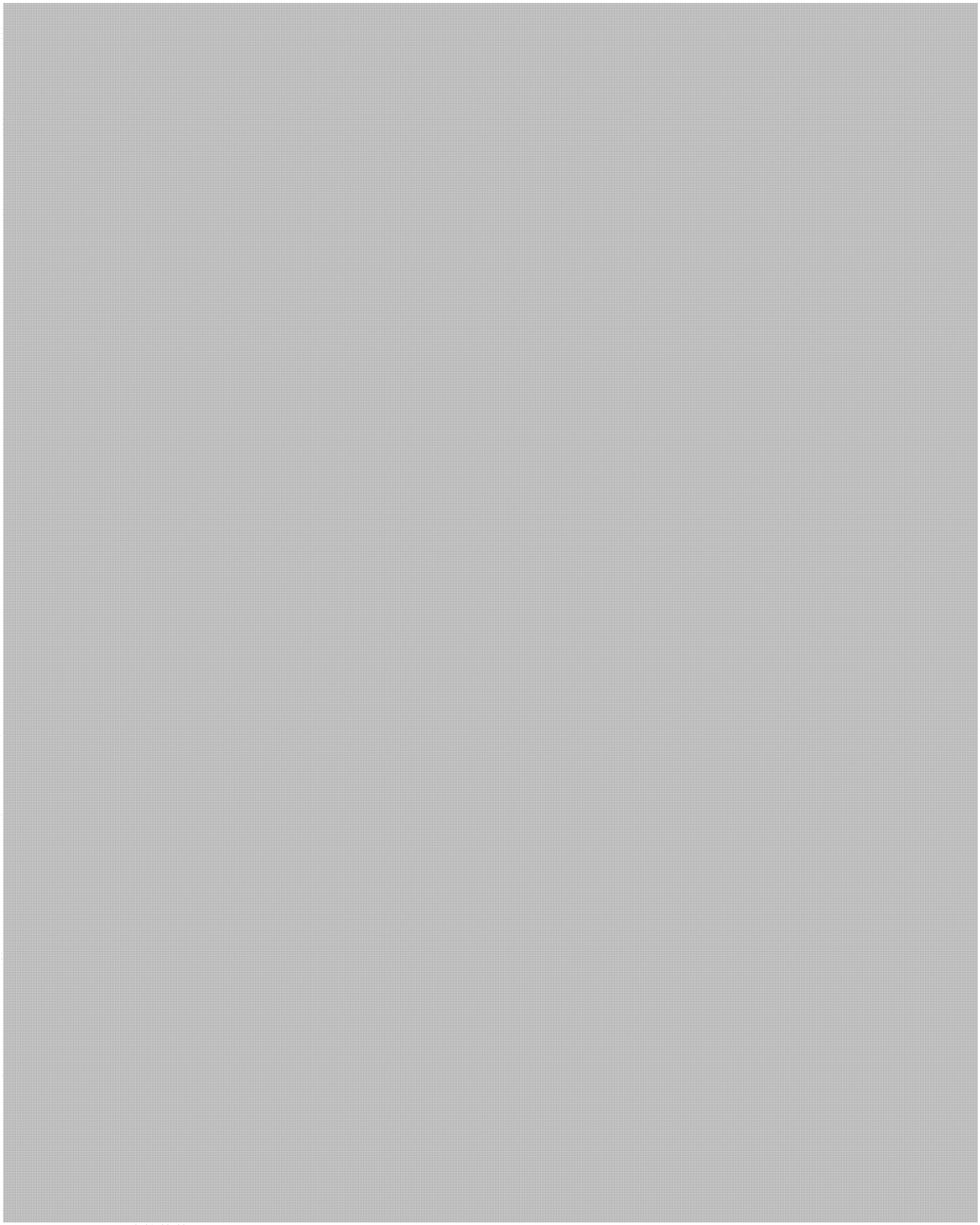
s.21(1)(a)

s.21(1)(b)



s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Smith, Kathleen
Sent: August-27-18 4:49 PM
To: Stewart, Julie; Morel, Philippe
Cc: Richter, Julie; Busby, Corina; Brekke, Heather; Davis, Neil; Brekke, Heather; Thorleifson, Erika; Khanna, Sukriti; Fagan, Ashley
Subject: Re: SRKW

Hi all,

[redacted]

K

From: Stewart, Julie
Sent: Monday, August 27, 2018 5:24 PM
To: Morel, Philippe
Cc: Richter, Julie; Busby, Corina; Brekke, Heather; Smith, Kathleen; Davis, Neil; Brekke, Heather; Thorleifson, Erika; Khanna, Sukriti
Subject: RE: SRKW

Philippe:

[redacted]

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[redacted]

Julie Stewart
Director / Directrice
Species at Risk Program / Programme des Espèces en Péril
200 rue Kent St.
Station 10W061
Ottawa, ON
K1A 0E6

(613) 949-7524 (t)
[redacted](c)

Julie.stewart@dfo-mpo.gc.ca

From: Morel, Philippe
Sent: Monday, August 27, 2018 4:23 PM
To: Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>
Cc: Richter, Julie <Julie.Richter@dfo-mpo.gc.ca>
Subject: TR: SRKW
Importance: High

Julie

[redacted]

Philippe

De : Blewett, Catherine
Envoyé : 27 août 2018 15:34
À : Morel, Philippe <Philippe.Morel@dfo-mpo.gc.ca>; Lapointe, Sylvie <Sylvie.Lapointe@dfo-mpo.gc.ca>; Reid, Rebecca <Rebecca.Reid@dfo-mpo.gc.ca>
Cc : Kahn, Zoe <Zoe.Kahn@dfo-mpo.gc.ca>
Objet : Fw: SRKW
Importance : Haute

Colleague,

[redacted]

Thanks for your help.
C
Sent from my BlackBerry 10 smartphone on the Bell network.

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From: catherine.blewett@dfo-mpo.gc.ca
Sent: Monday, August 27, 2018 4:07 PM
To: Young, George
Cc: Butcher, Ashley
Subject: Re: SRKW

George

[redacted]

Merci

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Young, George
Sent: Monday, August 27, 2018 3:57 PM
To: Blewett, Catherine
Cc: Butcher, Ashley
Subject: SRKW

Good afternoon Deputy,

[redacted]

Regards,
George Young

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Acting-Chief of Staff / Chef de cabinet par intérim
Office of the Hon. Jonathan Wilkinson / Bureau de L'hon Jonathan Wilkinson
Minister of Fisheries, Oceans and the Canadian Coast Guard /
Ministre des Pêches, des Océans et de la Garde côtière canadienne

T : 613-992-3474

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Khanna, Sukriti

From: Webb, Cheryl
Sent: August-27-18 10:19 AM
To: Thomson, Andrew; Davis, Neil
Subject: FW: Ecojustic letter
Attachments: SRKW ecojustice letter Aug 24 v2.doc

I will get you looped into the e-mail traffic.

C

From: Busby, Corina
Sent: Monday, August 27, 2018 10:16 AM
To: Spicer, Mary-Ann (EC) <mary-ann.spicer@canada.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>; Henneman, Sonja <sonja.henneman@tc.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Cc: Thorleifson, Erika <Erika.Thorleifson@dfo-mpo.gc.ca>; Marshall, Christopher (EC) <christopher.marshall@canada.ca>
Subject: RE: Ecojustic letter

Drafting a SN – is there a proposed agenda for this meeting?

Draft response letter attached for your initial review.

From: Spicer, Mary-Ann (EC) [mailto:mary-ann.spicer@canada.ca]
Sent: 2018–August-27 12:57 PM
To: Stewart, Julie; Henneman, Sonja; Webb, Cheryl
Cc: Thorleifson, Erika; Marshall, Christopher (EC); Busby, Corina
Subject: RE: Ecojustic letter

Sounds great…we will be on the lookout for the SN..given our DM called the mtg I just asked our DGO if we should send up a short email…so I would like to ensure I use the same issues as TC/DFO. (will it be coming before 3pm?)

MA

From: Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>
Sent: August 27, 2018 12:35 PM
To: Henneman, Sonja <sonja.henneman@tc.gc.ca>; Spicer, Mary-Ann (EC) <mary-ann.spicer@canada.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Cc: Thorleifson, Erika <Erika.Thorleifson@dfo-mpo.gc.ca>; Marshall, Christopher (EC) <christopher.marshall@canada.ca>; Busby, Corina <Corina.Busby@dfo-mpo.gc.ca>
Subject: RE: Ecojustic letter

So we're all on the same page….

1. DFO NHQ has started a draft response letter reflecting our conversation of last week

s.16(2)

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2. DFO NHQ will start to prepare a short scenario note for our DM which we will circulate to OGDs
3. The DFO RDG, Pacific (co-chair of advisory group) received an email late last week suggesting she might wish to convene a RDG/ADM level meeting to talk about the comments in the Ecojustice letter re the process. Nothing scheduled yet (given that it was just the end of the week last week)
4. I have not heard of an ADM level meeting to prepare for the DM level meeting, but have advised my ADM of DM Lucas' request.

Julie Stewart
Director / Directrice
Species at Risk Program / Programme des Espèces en Péril
200 rue Kent St.
Station 10W061
Ottawa, ON
K1A 0E6

(613) 949-7524 (t)
[redacted] c)

Julie.stewart@dfo-mpo.gc.ca

From: Henneman, Sonja <sonja.henneman@tc.gc.ca>
Sent: Monday, August 27, 2018 10:19 AM
To: Spicer, Mary-Ann (EC) <mary-ann.spicer@canada.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Cc: Thorleifson, Erika <Erika.Thorleifson@dfo-mpo.gc.ca>; Marshall, Christopher (EC) <christopher.marshall@canada.ca>
Subject: RE: Ecojustic letter

I can, but I haven't even started it yet. I was hoping the ADM's would meet and discuss this first. I suspect I will say that we propose a brief response to the latest letter. It is due at noon, so will start working on it soon.

From: Spicer, Mary-Ann (EC) [mailto:mary-ann.spicer@canada.ca]
Sent: Monday, August 27, 2018 10:16 AM
To: Henneman, Sonja <sonja.henneman@tc.gc.ca>; Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>
Cc: Thorleifson, Erika <Erika.Thorleifson@dfo-mpo.gc.ca>; Marshall, Christopher (EC) <christopher.marshall@canada.ca>
Subject: RE: Ecojustic letter

Thanks

Can you share yours?....we should be similar in input up the line. We have not had any request but I suspect its coming.

From: Henneman, Sonja <sonja.henneman@tc.gc.ca>
Sent: August 27, 2018 10:09 AM
To: Stewart, Julie <Julie.Stewart@dfo-mpo.gc.ca>; Spicer, Mary-Ann (EC) <mary-ann.spicer@canada.ca>; Webb, Cheryl <Cheryl.Webb@dfo-mpo.gc.ca>

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Cc: Thorleifson, Erika <Erika.Thorleifson@dfo-mpo.gc.ca>
Subject: RE: Ecojustic letter

Greetings,

Just a head's up that we have received an urgent request for a scenario note and briefing material for a meeting that DM Lucas has requested to discuss SRKW with ASDM Pham and DM Blewett in advance of the DMs breakfast tomorrow morning. We are to provide latest information on SRKW and the recent Ecojustice letter.

Sonja

-----Original Appointment-----
From: Stewart, Julie [mailto:Julie.Stewart@dfo-mpo.gc.ca]
Sent: Friday, August 24, 2018 8:08 AM
To: Stewart, Julie; Webb, Cheryl; Henneman, Sonja; mary-ann.spicer@canada.ca; Thorleifson, Erika
Subject: Ecojustic letter
When: Friday, August 24, 2018 11:00 AM-11:30 AM (UTC-05:00) Eastern Time (US & Canada).
Where: 1-877-413-4790 ID# [redacted] Nick's office)

Discuss response to Ecojustice letter.

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Ms. Dyna Tuytel
Barrister and Solicitor
Ms. Margot Venton
Barrister and Solicitor
EcoJustice
[redacted]

Dear Ms. Tuytel and Ms. Venton:

We are writing in response to your correspondence of August 20, 2018, regarding Southern Resident Killer Whales (SRKW).

Thank you for your feedback on the Indigenous and Multi-stakeholder Advisory Group. We value your clients' engagement in this group. As you've noted, good faith participation is essential for the success of the group. The three main objectives for this group are:

1. Provide a forum for the participants to discuss actions underway and planned by federal departments and others to protect SRKW, and to allow participants to provide advice on recovery actions and to share information to help inform government decision-making.

2. Promote dialogue and improve shared understanding of the complexities of SRKW recovery, shared responsibilities, and respective authorities of Advisory Group participants to reduce SRKW threats.

3. Identify opportunities for collaboration and partnership that can advance the collective implementation of the recovery measures identified in the *Species at Risk Action Plan for Northern and Southern Resident Killer Whale* (Orcinus orca) *in Canada* (2017), Oceans Protection Plan (2017) the *Science Based Review of the Effectiveness of Recovery Measures for Southern Resident Killer Whales* (2017), and the measures announced under the federal Whales Initiative on June 22, 2018 to promote recovery of the species.

In your letter you noted concern that the forum does not include the participation of scientists. In establishing this forum, the intent is to draw on science and expert advice available from other already established bodies. We look forward to continued collaboration with your clients through this forum.

Thank you as well for your comments on the Imminent Threat Assessment for the SRKW which was recently published on the Species at Risk Public Registry. As we have stated in previous correspondence in keeping with obligations under the *Species at Risk Act*, we are in the process of evaluation the protections needed to ensure the survival and recovery of the SRKW and preparing to make a recommendation to Cabinet for any further actions needed which are not covered through equivalent measures.

Canada

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We are also aware of the recent events that are affecting the health and status of the SRKW population and are also gravely concerned with the situation, including that of J-pod members, J35 and J50.

We again thank you for your continued communication on the advancement the Government of Canada, in partnership, is making on improving conditions for Southern Resident Killer Whale. While we appreciate your clients' interest in the progress of the Minister's recommendation, we wish to emphasize the practical advantages of the protections we currently have in place, and are putting in place, as expeditiously as we can.

Comment [D1]: Copied from an earlier letter

Yours sincerely,

s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Brekke, Heather
Sent: August-28-18 11:10 AM
To: Malikian, Janine
Cc: Jones, Lisa Ann
Subject: RE: FOR REVIEW: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)
Attachments: NR_AmendedRecoveryStrategy_RKW-editsMorelandMinO_hb.docx

---

From: Malikian, Janine
Sent: August-28-18 10:32 AM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: FOR REVIEW: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)
Importance: High

Hi Heather,

We've had some requests for changes to the News Release from NHQ:

[redacted]

Can you please review the attached?

Thanks,

Janine

From: Brekke, Heather
Sent: August-27-18 2:40 PM
To: Malikian, Janine
Cc: Jones, Lisa Ann
Subject: RE: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)

Hi Janine,

[redacted]

Cheers,

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Heather

From: Malikian, Janine
Sent: August-27-18 2:17 PM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: FW: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)
Importance: High

Hi Heather,

[redacted]

Thanks,

Janine

From: Smith, Kathleen
Sent: August-27-18 1:56 PM
To: Malikian, Janine; Girouard, Louise
Cc: Hubley, Marian; Parkes, Sara; Fagan, Ashley; Payne, Matthew
Subject: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)
Importance: High

Hi Janine/Louise,

[redacted]

Pls confirm,
Thanks!

Kathleen Smith
A/Manager Communications / Gestionnaire p-i
Aquatic Ecosystems Sector / Équipes du Secteur des écosystèmes aquatiques

(613) 990-0636 (office-bureau) / [redacted] **Blackberry)**

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No information has been removed or severed from this page

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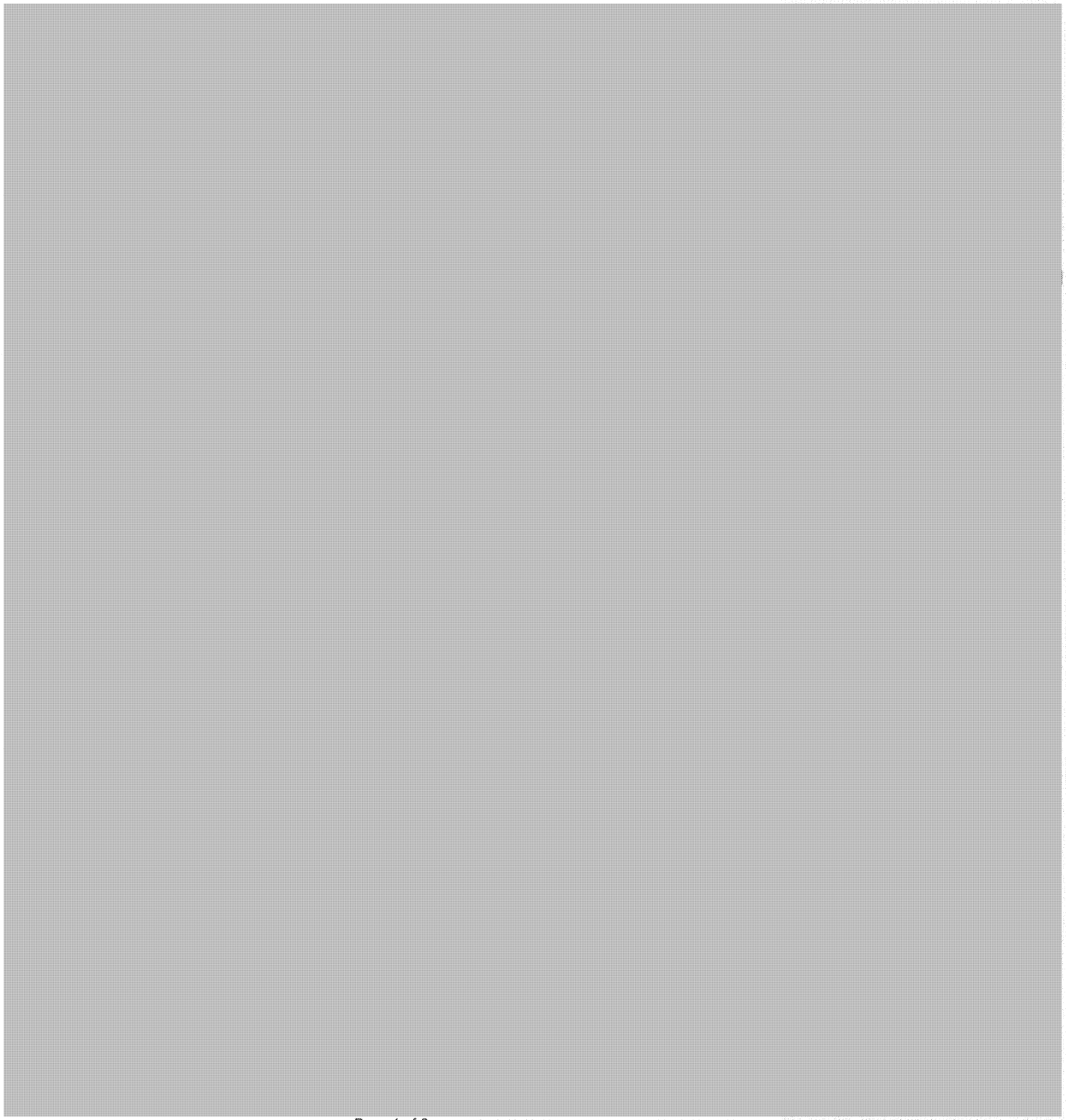
s.21(1)(a)

s.21(1)(b)

DRAFT

News Release



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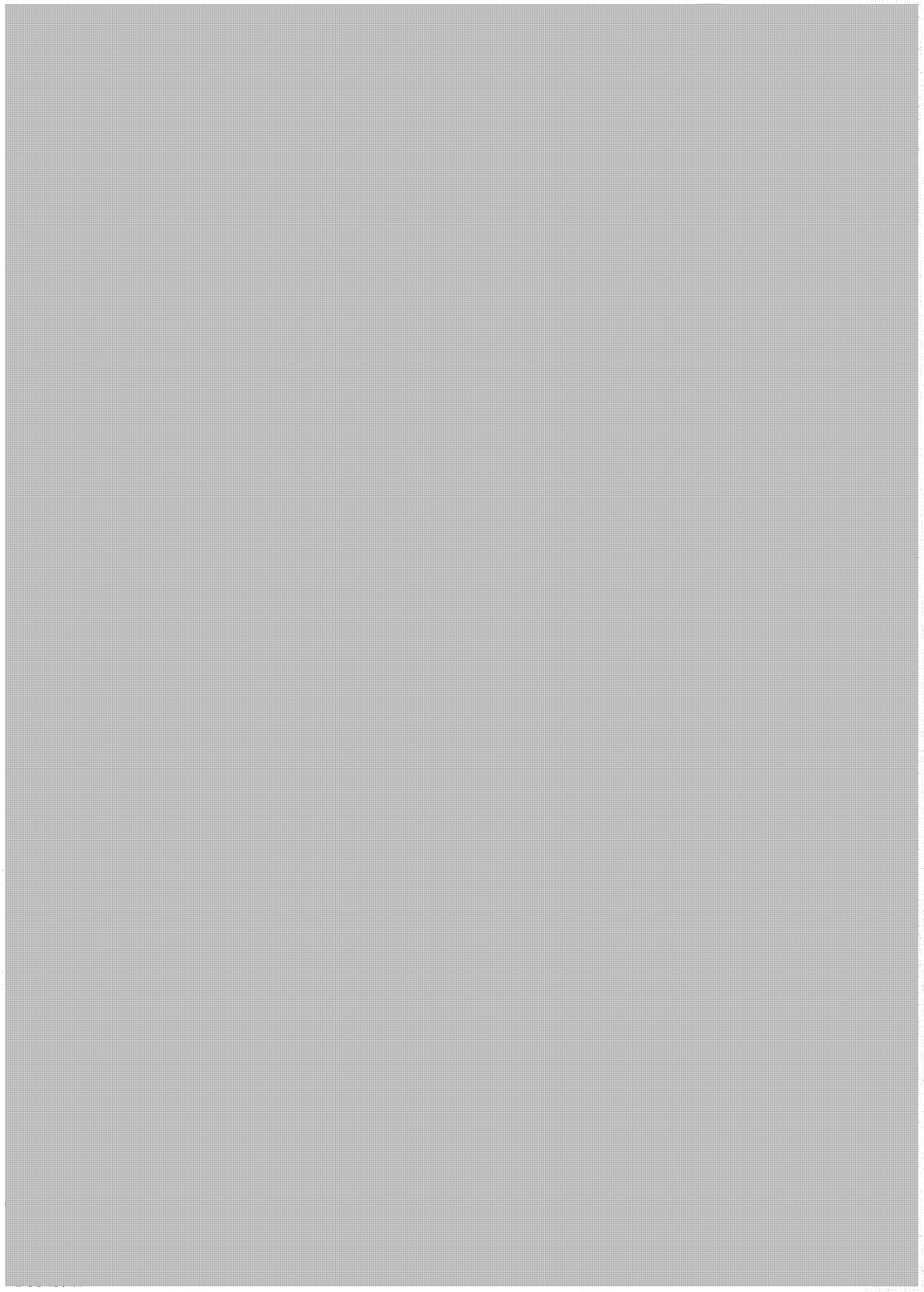
s.21(1)(a)

s.21(1)(b)

DRAFT



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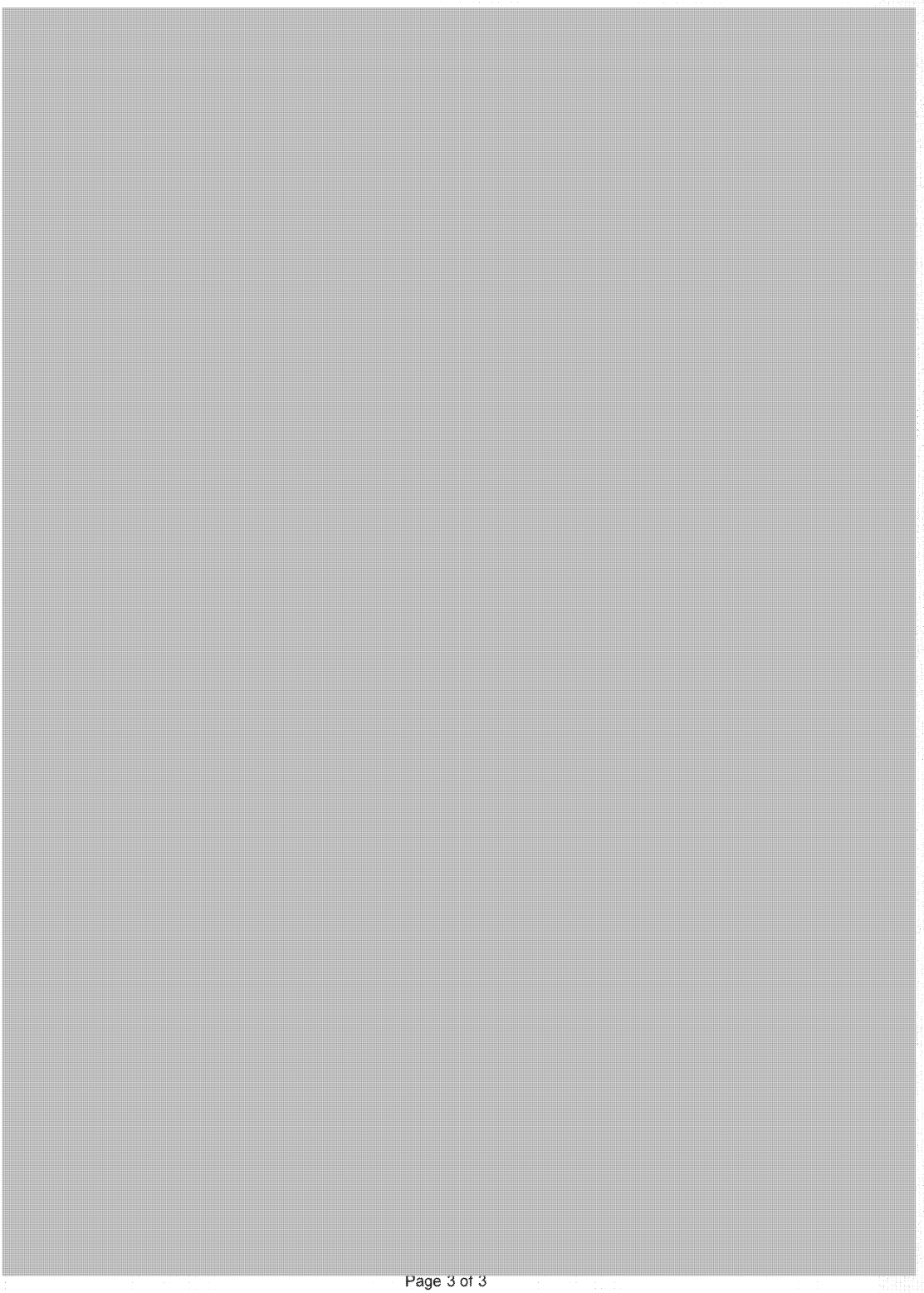
s.21(1)(a)

s.21(1)(b)

DRAFT



s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Brekke, Heather
Sent: August-28-18 3:46 PM
To: Jones, Lisa Ann
Subject: FW: One pager and stakeholder list- status update?
Attachments: SRKW aRS draft Phone Call Listv.2.docx

The latest version

From: Thomson, Andrew
Sent: August-28-18 3:36 PM
To: Brekke, Heather; Harber, Lee
Subject: RE: One pager and stakeholder list- status update?

I did a version up

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

---

From: Thomson, Andrew
Sent: Tuesday, August 28, 2018 3:18 PM
To: Brekke, Heather <Heather.Brekke@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: RE: One pager and stakeholder list- status update?

These are the approved messages.

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

---

From: Brekke, Heather
Sent: Tuesday, August 28, 2018 3:11 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: RE: One pager and stakeholder list- status update?

Hi Andy,

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s.21(1)(a)

s.21(1)(b)

I made recommendations reflected in the document attached, but have a few questions to ensure this is thorough:

[redacted]

Thanks
Heather

From: Thomson, Andrew
Sent: August-28-18 1:57 PM
To: Brekke, Heather; Harber, Lee
Subject: RE: One pager and stakeholder list- status update?

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

---

From: Brekke, Heather
Sent: Tuesday, August 28, 2018 1:12 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: RE: One pager and stakeholder list- status update?

[redacted]

From: Thomson, Andrew
Sent: August-28-18 12:52 PM
To: Brekke, Heather; Harber, Lee
Subject: RE: One pager and stakeholder list- status update?

[redacted]

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s.21(1)(a)

s.21(1)(b)

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

From: Brekke, Heather
Sent: Tuesday, August 28, 2018 12:42 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: RE: One pager and stakeholder list- status update?

[redacted]

From: Thomson, Andrew
Sent: August-28-18 12:39 PM
To: Brekke, Heather; Harber, Lee
Subject: FW: One pager and stakeholder list- status update?
Importance: High

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

From: Kahn, Zoe
Sent: Tuesday, August 28, 2018 12:38 PM
To: Morel, Philippe <Philippe.Morel@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: One pager and stakeholder list- status update?
Importance: High

Hi there,

[redacted]

Zoe

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Zoe Kahn
Chief of Staff/ Chef de cabinet
Deputy Minister's Office/ Cabinet du sous-ministre
Fisheries and Oceans Canada/ Pêches et Océans Canada
Tel: (613) 993-9226

s.21(1)(a)

s.21(1)(b)

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Khanna, Sukriti

From: Brekke, Heather
Sent: August-28-18 1:13 PM
To: Jones, Lisa Ann
Subject: FW: One pager and stakeholder list- status update?
Attachments: SRKW aRS draft Phone Call List.docx

[redacted]

From: Brekke, Heather
Sent: August-28-18 1:12 PM
To: Thomson, Andrew; Harber, Lee
Subject: RE: One pager and stakeholder list- status update?

Please see attached cleaned up word version, based off your last email.

From: Thomson, Andrew
Sent: August-28-18 12:52 PM
To: Brekke, Heather; Harber, Lee
Subject: RE: One pager and stakeholder list- status update?

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

From: Brekke, Heather
Sent: Tuesday, August 28, 2018 12:42 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: RE: One pager and stakeholder list- status update?

[redacted]

From: Thomson, Andrew
Sent: August-28-18 12:39 PM
To: Brekke, Heather; Harber, Lee

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Subject: FW: One pager and stakeholder list- status update?
Importance: High

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

---

From: Kahn, Zoe
Sent: Tuesday, August 28, 2018 12:38 PM
To: Morel, Philippe <Philippe.Morel@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: One pager and stakeholder list- status update?
Importance: High

Hi there,

[redacted]

Zoe

Zoe Kahn
Chief of Staff/ Chef de cabinet
Deputy Minister's Office/ Cabinet du sous-ministre
Fisheries and Oceans Canada/ Pêches et Océans Canada
Tel: (613) 993-9226

Pages 3836 to / à 3837
are duplicates of
sont des duplicatas des
pages 3945 to / à 3946

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s.21(1)(a)

s.21(1)(b)

Khanna, Sukriti

From: Brekke, Heather
Sent: August-28-18 3:46 PM
To: Jones, Lisa Ann
Subject: FW: One pager and stakeholder list- status update?
Attachments: Notification of Publication of the proposed Amended Recovery Strategy fo....docx; RKW aRS backgrounder.docx

[redacted]

Andy.

From: Thomson, Andrew
Sent: August-28-18 3:18 PM
To: Brekke, Heather; Harber, Lee
Subject: RE: One pager and stakeholder list- status update?

These are the approved messages.

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

---

From: Brekke, Heather
Sent: Tuesday, August 28, 2018 3:11 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: RE: One pager and stakeholder list- status update?

Hi Andy,

I made recommendations reflected in the document attached, but have a few questions to ensure this is thorough:

[redacted]

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s.21(1)(a)

s.21(1)(b)

Thanks
Heather

From: Thomson, Andrew
Sent: August-28-18 1:57 PM
To: Brekke, Heather; Harber, Lee
Subject: RE: One pager and stakeholder list- status update?

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

---

From: Brekke, Heather
Sent: Tuesday, August 28, 2018 1:12 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: RE: One pager and stakeholder list- status update?

Please see attached cleaned up word version, based off your last email.

From: Thomson, Andrew
Sent: August-28-18 12:52 PM
To: Brekke, Heather; Harber, Lee
Subject: RE: One pager and stakeholder list- status update?

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

---

From: Brekke, Heather
Sent: Tuesday, August 28, 2018 12:42 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: RE: One pager and stakeholder list- status update?

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

[redacted]

From: Thomson, Andrew
Sent: August-28-18 12:39 PM
To: Brekke, Heather; Harber, Lee
Subject: FW: One pager and stakeholder list- status update?
Importance: High

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

From: Kahn, Zoe
Sent: Tuesday, August 28, 2018 12:38 PM
To: Morel, Philippe <Philippe.Morel@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: One pager and stakeholder list- status update?
Importance: High

Hi there,

[redacted]

Zoe

Zoe Kahn
Chief of Staff/ Chef de cabinet
Deputy Minister's Office/ Cabinet du sous-ministre
Fisheries and Oceans Canada/ Pêches et Océans Canada
Tel: (613) 993-9226

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s.19(1)

Southern Resident Killer Whale: amended Recovery Strategy Draft phone call list

List developed with consideration of SRKW Advisory group participants, potentially affected First Nations, and those who responded via letter to the external review of the amended Recovery Strategy.

*Those with an asterisk sit on the SRKW advisory board. If no name provided (blank), number is a general reception line. If telephone cell blank, we have not found direct number.

Name	Affiliation	Phone Number	Caller (DFO staff)	Contacted (details: call completed? Discusssion held or VM)
Indigenous groups/representatives				
	UBC			
	First Nations Summit			
	FNFC			
	FNFC			
	FNFC			
	Maa-nulth (also Uchucklesaht Tribe)			
	Maa-nulth Joint Fisheries Committee			
	Nuu-chah-nulth Tribal Council			
	Tla-o-qui-aht First Nation			
	Ahousaht First Nation			
	Huu-ay-aht First Nation			
	Ka:'yu:'k't'h'/Che:k:tles7et'h' First Nations			
	Tseshaht First Nation			
	Toquaht Nation			
	Pacheedaht First Nation			
	Ditidaht First Nation			
	Secretariat of the Haida Nation (note NRKW specific)			
NGOs				
	Raincoast Conservation Foundation			
	Georgia Strait Alliance			
	WWF Canada			
	David Suzuki Foundation			
	Natural Resources Defence Council			
	Vancouver Aquarium [Oceans Wise / CORI Team]			
	Dyna Tuytel and Margot Venton			

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s.19(1)

Southern Resident Killer Whale: amended Recovery Strategy Draft phone call list

Shipping Industry				
	Port of Vancouver			
	Shipping Federation of Canada			
	Chamber of Shipping			
	Canadian Ferry Association			
	Sport Fishing Advisory Board			
	BC Seafood Alliance			
Whale Watching				
	Pacific Whale Watching Association			
Provincial Government				
Mark Zacharias*	Ministry of Environment and Climate Change Strategy	250 387-5429		
Jennifer McGuire (alternate)*	Environmental Sustainability Division	778 698-8521		
Municipal and Regional Government				
	Metro Vancouver Regional District			
	District of Ucluelet			
Other				
	BC Chamber of Commerce			
	Port Renfrew Chamber of Commerce			
	West Coast Aquatic			
MPs				
	MP Courtney-Alberni			
	MP Cowichan-Malahat-Langford			

Pages 3843 to / à 3846
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

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s.16(2)
s.21(1)(a)
s.21(1)(b)

Mbarushimana, Jenny

From: Harber, Lee
Sent: August-28-18 9:25 AM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: RE: SRKW amended RS document
Attachments: SRKW IMAG Participant List Contact Info.docx

Here is my list – let's see where there is overlap

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

From: Brekke, Heather
Sent: 2018–August-28 9:23 AM
To: Thomson, Andrew; Harber, Lee
Cc: Webb, Cheryl; Barton, Meagan
Subject: RE: SRKW amended RS document

Hi Andy,

Lee and I are consolidating our lists and confirming the extent of phone numbers we actually have. We will aim to get this back later this morning.

Best
Heather

From: Thomson, Andrew
Sent: August-28-18 9:14 AM
To: Harber, Lee; Brekke, Heather
Cc: Webb, Cheryl; Barton, Meagan
Subject: SRKW amended RS document
Importance: High

Lee / Heather

[redacted]

So - immediate need is a table of the SRKW advisory group participants, potential affected FN's (MNA, patcheedaht and didiaht) and anyone not included above who contributed to the recovery strategy. NCR will also review the list.

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Need a table of name, affiiiation, phone number, a blank column for assigned caller, and a column to record if the call was completed or not.

Can I get this this morning?

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches
Pacific Region | Region du Pacifique
Fisheries & Oceans Canada | Pêches et Océans Canada

Suite 200 – 401 Burrard St.
Vancouver, BC, Canada V6C 3S4
andrew.thomson@dfo-mpo.gc.ca
Telephone | Téléphone 604.666.0751
Facsimile | Télécopieur 250.666.8069
Government of Canada | Gouvernement du Canada.

Pages 3849 to / à 3852
are duplicates of
sont des duplicatas des
pages 2967 to / à 2970

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Wilkinson, Davida

From: Harber, Lee
Sent: August-28-18 10:04 AM
To: Jones, Lisa Ann
Cc: Brekke, Heather
Subject: SRKW IMAG Participant List Contact Info.docx
Attachments: SRKW IMAG Participant List Contact Info.docx

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s.19(1)

Southern Resident Killer Whale: Indigenous and Multi-Stakeholder Advisory Group – Participant List

Sector	Name	Affiliation	Phone Number	Caller	Contacted
Indigenous representatives		UBC			
		First Nations Summit			
		FNFC			
		FNFC			
		FNFC			
NGOs		Raincoast Conservation Foundation			
		Georgia Strait Alliance			
		WWF Canada			
		David Suzuki Foundation			
		Natural Resources Defence Council			
		Vancouver Aquarium [Oceans Wise / CORI Team]			
Shipping Industry		Port of Vancouver			
		Shipping Federation of Canada			
		Chamber of Shipping			
		Canadian Ferry Association			
Fishing Industry		Sport Fishing Advisory Board			
		BC Seafood Alliance			
Whale Watching		Pacific Whale Watching Association			
Provincial Government	Mark Zacharias	Ministry of Environment and Climate Change	250 387-5429		

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Southern Resident Killer Whale: Indigenous and Multi-Stakeholder Advisory Group – Participant List

		Strategy			
	Jennifer McGuire (alternate)	Environmental Sustainability Division	778 698-8521		
Municipal Government		Metro Vancouver Regional District			

s.21(1)(a)
s.21(1)(b)
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Dozie, Juachi

From: Brekke, Heather
Sent: August-28-18 3:11 PM
To: Thomson, Andrew; Harber, Lee
Subject: RE: One pager and stakeholder list- status update?
Attachments: SRKW aRS draft Phone Call Listv.1.docx

Hi Andy,

I made recommendations reflected in the document attached, but have a few questions to ensure this is thorough:

[redacted]

Thanks
Heather

From: Thomson, Andrew
Sent: August-28-18 1:57 PM
To: Brekke, Heather; Harber, Lee
Subject: RE: One pager and stakeholder list- status update?

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

From: Brekke, Heather
Sent: Tuesday, August 28, 2018 1:12 PM
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Subject: RE: One pager and stakeholder list- status update?

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[redacted]

From: Thomson, Andrew
Sent: August-28-18 12:52 PM
To: Brekke, Heather; Harber, Lee
Subject: RE: One pager and stakeholder list- status update?

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

From: Brekke, Heather
Sent: Tuesday, August 28, 2018 12:42 PM
To: Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>
Subject: RE: One pager and stakeholder list- status update?

[redacted]

From: Thomson, Andrew
Sent: August-28-18 12:39 PM
To: Brekke, Heather; Harber, Lee
Subject: FW: One pager and stakeholder list- status update?
Importance: High

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

From: Kahn, Zoe
Sent: Tuesday, August 28, 2018 12:38 PM
To: Morel, Philippe <Philippe.Morel@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: One pager and stakeholder list- status update?
Importance: High

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Hi there,

[redacted]

Zoe

Zoe Kahn
Chief of Staff/ Chef de cabinet
Deputy Minister's Office/ Cabinet du sous-ministre
Fisheries and Oceans Canada/ Pêches et Océans Canada
Tel: (613) 993-9226

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s.19(1)

Southern Resident Killer Whale: amended Recovery Strategy Draft phone call list

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	First Nations Summit			
	FNFC			
	FNFC			
	FNFC			
	Maa-nulth (also Uchucklesaht Tribe)			
	Maa-nulth Joint Fisheries Committee			
	Nuu-chah-nulth Tribal Council			
	Pacheedaht First Nation			
	Ditidaht First Nation			
	Secretariat of the Haida Nation (note NRKW specific)			
NGOs				
	Raincoast Conservation Foundation			
	Georgia Strait Alliance			
	WWF Canada			
	David Suzuki Foundation			
	Natural Resources Defence Council			
	Vancouver Aquarium [Oceans Wise / CORI Team]			
Shipping Industry				
	Port of Vancouver			
	Shipping Federation of Canada			
	Chamber of Shipping			
Leslie James*	Canadian Ferry			

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s.19(1)

Southern Resident Killer Whale: amended Recovery Strategy Draft phone call list

	Association	C: 250-217-6369		
Fishing Sectors				
	Sport Fishing Advisory Board			
	BC Seafood Alliance			
	Pacific Whale Watching Association			
Provincial Government				
Mark Zacharias*	Ministry of Environment and Climate Change Strategy			
Jennifer McGuire (alternate)*	Environmental Sustainability Division			
Municipal and Regional Government				
	Metro Vancouver Regional District			
	District of Ucluelet			
Other				
	BC Chamber of Commerce			
	Port Renfrew Chamber of Commerce			
	West Coast Aquatic			

s.21(1)(a)

s.21(1)(b)

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Wong, Eva

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: August-28-18 4:04 PM
To: Brekke, Heather
Subject: FW: Draft_Reply_2018-001-01486.docx
Attachments: MECTS-#3942330-v3-Draft_Reply_2018-001-01486_hb.docx

[redacted]

Let me know what you think.
Candace

From: Brekke, Heather
Sent: Tuesday, August 28, 2018 3:50 PM
To: pac.prmc / pac.urpcm (DFO/MPO)
Subject: RE: Draft_Reply_2018-001-01486.docx

Please see my suggested edits.

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: August-28-18 1:37 PM
To: Brekke, Heather
Subject: Draft_Reply_2018-001-01486.docx
Importance: High

Hi Heather.

This response was drafted from previously approved text that we have been using for the many letters on this topic.

We are looking for your approval to use the material in response to this new incoming **by 1:30pm Wednesday, but sooner if at all possible. If you have no substantial edits, we will return the draft to Ottawa or to the appropriate Director for signature and distribution without further regional approvals**.

If the material needs to be updated, please use track changes to insert any necessary edits in the attached document, and FORWARD the draft to XPAC PRMCU. We will get further approvals, including your supervisory chain.

Your review should also include technical accuracy and consistency with policy direction.

If you think someone else must see it before you can approve, **please advise us and we will forward**.

Thanks,

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Alison

Please direct all e-mails regarding 001 and 501 correspondence to XPAC PRMCU.

Candace McGuire, Heather Fowlie & Alison Jacques

Managers, Pacific Region Ministerial Correspondence Unit
Fisheries and Oceans Canada/Government of Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823 Fax: 604-666-8956

Gestionnaires de la correspondance ministériel
Pêches et Océans Canada/Gouvernement du Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823, télécopieur 604-666-8956

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Ministerial Correspondence / Correspondance ministérielle Approval Form / Formulaire d'approbation

MCCU DOCKET # / N° DU DOSSIER UCCM : 2018-001-01486	MCCU CONTACT / RESPONSABLE À L'UCCM :
REPLY BY MINO / RÉPONSE DU MINISTRE	

DATE AND DEADLINES / DATE ET ÉCHÉANCE

DUE DATE TO MINO / ÉCHÉANCE AU CM : (mm-dd-yyyy / mm-jj-aaaa)	/2018	**DATE RECEIVED IN MCCU / DATE DE RÉCEPTION À L'UCCM :** (mm-dd-yyyy / mm-jj-aaaa)	/2018

COMMENTS / APPROACH – COMMENTAIRES / APPROCHE

Drafted from approved text in the appendix to 2018-001-01016

APPROVALS / APPROBATIONS

Level / Niveau	Name, Title and Sector / Nom, titre et secteur	Assigned Date / Date fixée	Date Due / Échéance	Date Approved / Date d'approbation	Changes / Modifications
	Paul Cottrell Pacific Marine Mammal Coordinator, Fisheries Management Branch			August 27, 2018	Yes
3 FM - SARA - Manager, SARA in FM, RD FM	Heather Brekke ~~Acting~~ Team Lead, Marine Species at Risk (SARA), Fisheries Management Branch			August 28, 2018	Yes
	Robyn Kenyon Team Lead, Fisheries Management Branch				
	Karen Leslie ~~A/~~Manager, Species at Risk Program, Ecosystem Management Branch				
	Approvals needed in Ottawa? Sylvie Lapointe?				
IF NECESSARY / SI NÉCESSAIRE					
Regional Director General / Directeur(trice) général régional(e)					
ADM / RDG / DC / CO / AC SMA / DGR / SA / BC / CA					
Indigenous Affairs / Affaires autochtones Legal / Services juridiques IGA / AI					
IF / SI PROVINCIAL / TERRITORIAL					
DM / SM					
PCO / BCP					

OTHER CONSULTATIONS / AUTRES CONSULTATIONS

INFO COPIES TO / COPIES POUR INFORMATION À (Office, Branch, Date / Bureau, direction, date)	**DEVELOPED WITH SME(S) OR OTHER STAKEHOLDER(S) / ÉLABORÉ AVEC EXPERT(S) EN LA MATIÈRE OU AUTRE(S) INTERVENANT(S)** (Name, Title, Branch, Date / Nom, titre, direction, date)
•	• Manager, Ministerial Correspondence, Pacific Region
OGD / AMG - (Name, Title, Branch, Date / Nom, titre, direction, date)	

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b.c.c. / Cci – (Name, Department / Nom, ministère)	c.c. – (Name, email address / contact info / Nom, courriel, coordonnées)
•	•
ATTACHMENTS TO RESPONSE / PIÈCES JOINTES À LA RÉPONSE	
•	

Field Code Changed

Pages 3865 to / à 3866
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

s.21(1)(a)

s.21(1)(b)

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Wong, Eva

From: Malikian, Janine
Sent: August-28-18 10:32 AM
To: Brekke, Heather
Cc: Jones, Lisa Ann
Subject: FOR REVIEW: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)
Attachments: NR_AmendedRecoveryStrategy_RKW-editsMorelandMinO.docx

Importance: High

Hi Heather,

[redacted]

Thanks,

Janine

From: Brekke, Heather
Sent: August-27-18 2:40 PM
To: Malikian, Janine
Cc: Jones, Lisa Ann
Subject: RE: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)

Hi Janine,

[redacted]

Cheers,
Heather

From: Malikian, Janine
Sent: August-27-18 2:17 PM
To: Brekke, Heather
Cc: Jones, Lisa Ann

s.16(2) s.21(1)(a) s.21(1)(b)

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Subject: FW: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)
Importance: High

Hi Heather,

[redacted]

Thanks,

Janine

From: Smith, Kathleen
Sent: August-27-18 1:56 PM
To: Malikian, Janine; Girouard, Louise
Cc: Hubley, Marian; Parkes, Sara; Fagan, Ashley; Payne, Matthew
Subject: MINO would like to see draft NR for Recovery Strategy (Resident Killer Whales)
Importance: High

Hi Janine/Louise,

[redacted]

Pls confirm,
Thanks!

Kathleen Smith
A/Manager Communications / Gestionnaire p-i
Aquatic Ecosystems Sector / Équipes du Secteur des écosystèmes aquatiques

(613) 990-0636 (office-bureau) / [redacted] **(Blackberry)**
Fisheries and Oceans Canada / Pêches et Océans Canada

s.21(1)(a)

s.21(1)(b)

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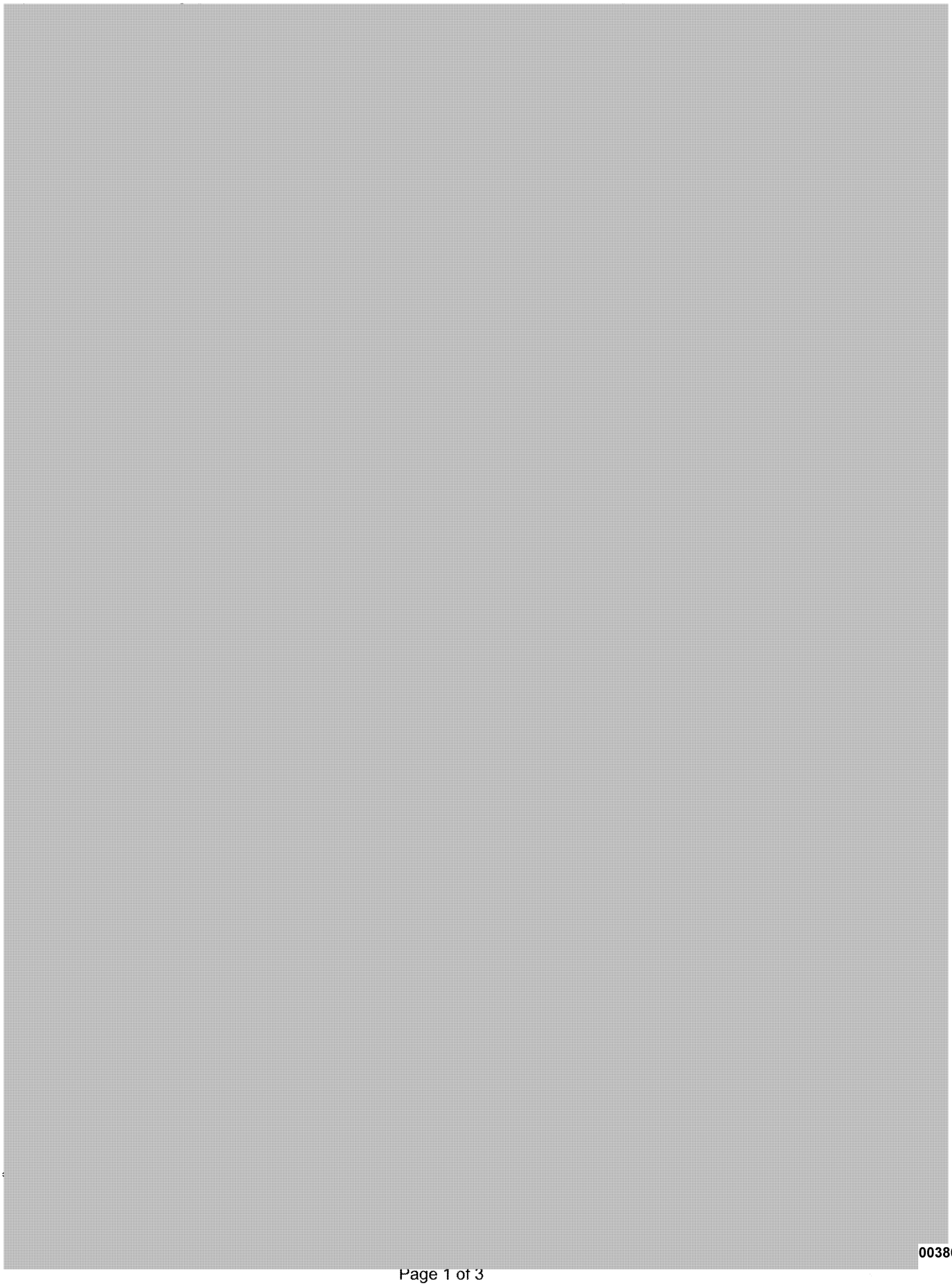
DRAFT

News Release

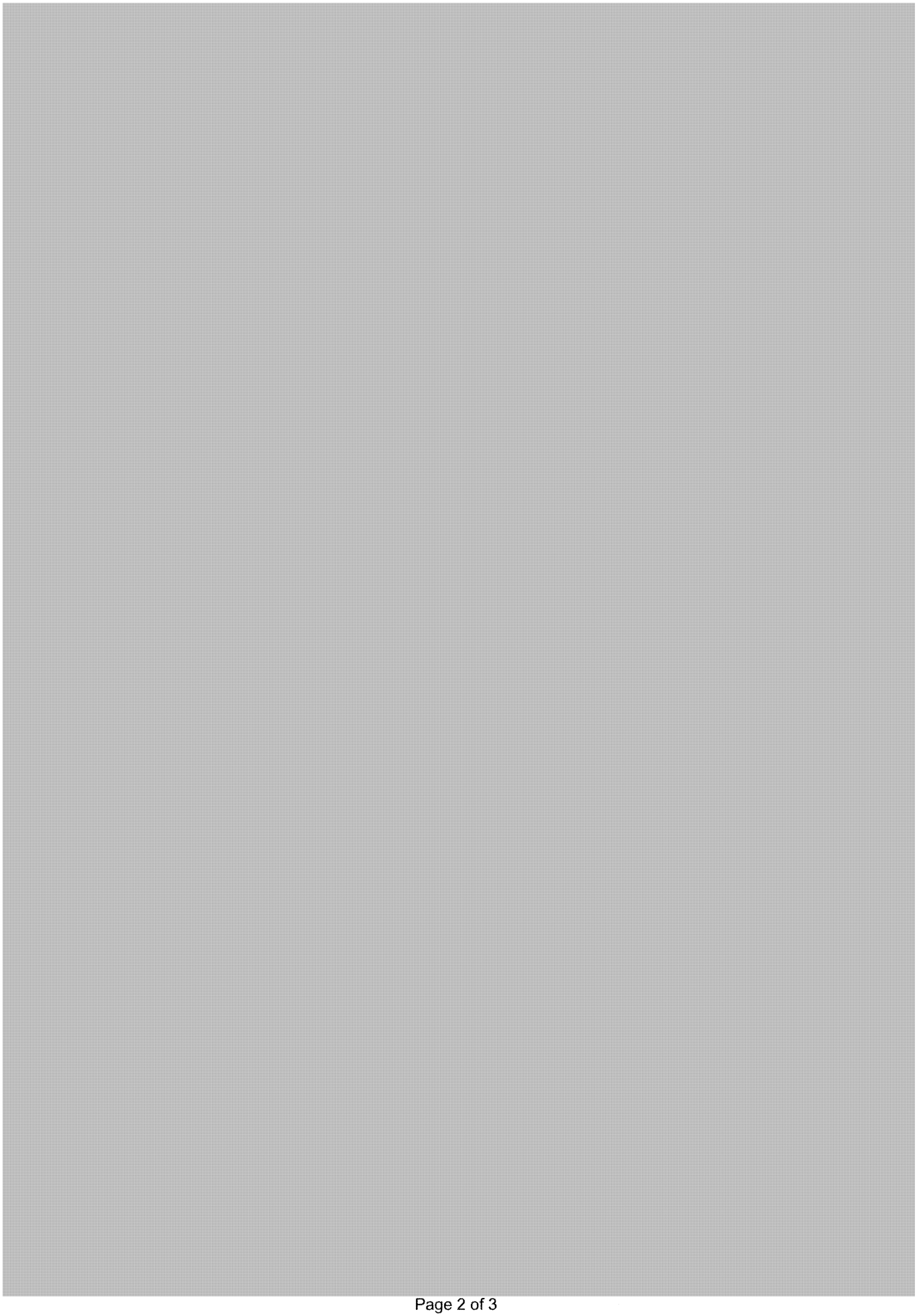


Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

s.21(1)(a)

s.21(1)(b)

DRAFT



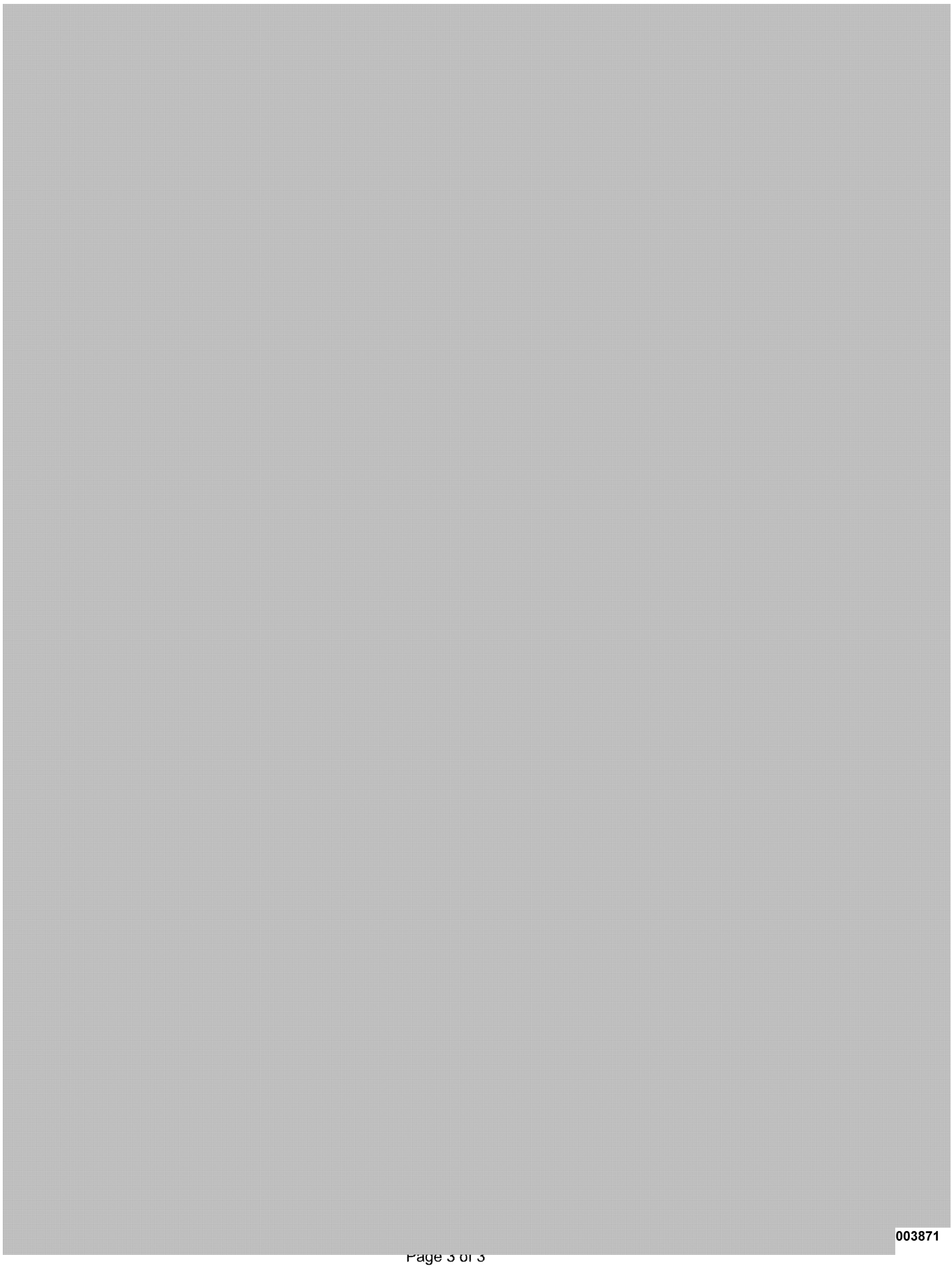
003870

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

s.21(1)(a)

s.21(1)(b)

DRAFT



003871

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Wong, Eva

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: August-28-18 1:37 PM
To: Brekke, Heather
Subject: Draft_Reply_2018-001-01486.docx
Attachments: MECTS-#3942330-v3-Draft_Reply_2018-001-01486.docx; 2018-001-01486.pdf

Importance: High

Hi Heather.

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We are looking for your approval to use the material in response to this new incoming **by 1:30pm Wednesday, but sooner if at all possible. If you have no substantial edits, we will return the draft to Ottawa or to the appropriate Director for signature and distribution without further regional approvals**.

If the material needs to be updated, please use track changes to insert any necessary edits in the attached document, and FORWARD the draft to XPAC PRMCU. We will get further approvals, including your supervisory chain.

Your review should also include technical accuracy and consistency with policy direction.

If you think someone else must see it before you can approve, **please advise us and we will forward**.

Thanks,
Alison

Please direct all e-mails regarding 001 and 501 correspondence to XPAC PRMCU.

Candace McGuire, Heather Fowlie & Alison Jacques

Managers, Pacific Region Ministerial Correspondence Unit
Fisheries and Oceans Canada/Government of Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823 Fax: 604-666-8956

Gestionnaires de la correspondance ministériel
Pêches et Océans Canada/Gouvernement du Canada
XPACPRMCU@dfo-mpo.gc.ca Tel 604-666-0823, télécopieur 604-666-8956

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Information Act / Document divulgué en vertu

Ministerial Correspondence / Correspondance ministérielle Approval Form / Formulaire d'approbation

MCCU DOCKET # / N° DU DOSSIER UCCM : 2018-001-01486	MCCU CONTACT / RESPONSABLE À L'UCCM :
REPLY BY MINO / RÉPONSE DU MINISTRE	

DATE AND DEADLINES / DATE ET ÉCHÉANCE

DUE DATE TO MINO / ÉCHÉANCE AU CM : (mm-dd-yyyy / mm-jj-aaaa)	/2018	DATE RECEIVED IN MCCU / DATE DE RÉCEPTION À L'UCCM : (mm-dd-yyyy / mm-jj-aaaa)	/2018

COMMENTS / APPROACH – COMMENTAIRES / APPROCHE

Drafted from approved text in the appendix to 2018-001-01016

APPROVALS / APPROBATIONS

Level / Niveau	Name, Title and Sector / Nom, titre et secteur	Assigned Date / Date fixée	Date Due / Échéance	Date Approved / Date d'approbation	Changes / Modifications
	Paul Cottrell Pacific Marine Mammal Coordinator, Fisheries Management Branch			August 27, 2018	Yes
3 FM - SARA - Manager, SARA in FM, RD FM	Heather Brekke Acting Team Lead, Marine Species at Risk (SARA), Fisheries Management Branch				
	Robyn Kenyon Team Lead, Fisheries Management Branch				
	Karen Leslie A/Manager, Species at Risk Program, Ecosystem Management Branch				
	Approvals needed in Ottawa? Sylvie Lapointe?				
IF NECESSARY / SI NÉCESSAIRE					
Regional Director General / Directeur(trice) général régional(e)					
ADM / RDG / DC / CO / AC SMA / DGR / SA / BC / CA					
Indigenous Affairs / Affaires autochtones Legal / Services juridiques IGA / AI					
IF / SI PROVINCIAL / TERRITORIAL					
DM / SM					
PCO / BCP					

OTHER CONSULTATIONS / AUTRES CONSULTATIONS

INFO COPIES TO / COPIES POUR INFORMATION À (Office, Branch, Date / Bureau, direction, date)	**DEVELOPED WITH SME(S) OR OTHER STAKEHOLDER(S) / ÉLABORÉ AVEC EXPERT(S) EN LA MATIÈRE OU AUTRE(S) INTERVENANT(S)** (Name, Title, Branch, Date / Nom, titre, direction, date)
•	• Manager, Ministerial Correspondence, Pacific Region
OGD / AMG - (Name, Title, Branch, Date / Nom, titre, direction, date)	

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•

FOR MCCU USE / RÉSERVÉ À L'UCCM

b.c.c. / Cci – (Name, Department / Nom, ministère)	c.c. – (Name, email address / contact info / Nom, courriel, coordonnées)
•	•
ATTACHMENTS TO RESPONSE / PIÈCES JOINTES À LA RÉPONSE	
•	

Pages 3875 to / à 3876
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sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act
de la Loi sur l'accès à l'information

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Wong, Eva

From: McMillan, Christie
Sent: August-28-18 4:12 PM
To: May-McNally, Shannan
Cc: Brekke, Heather; Jones, Lisa Ann
Subject: Draft final paragraph for [redacted]
Attachments: [redacted]

Hi Shannan,
Good to chat with you today.
As discussed, I have drafted a new version of the [redacted] and attached the most recent version [redacted] with this change tracked.
I thought that I would run it by you first, just to ensure that it still meets the requirements [redacted] and then we can send it for review to the others that were on the call.
There are just a couple of other minor edits in the attached version... let me know if you have any questions about these.
Thanks!
Christie

Christie McMillan
Species At Risk Recovery Planner
Fisheries and Oceans Canada
604-666-4775
Christie.McMillan@dfo-mpo.gc.ca

Pages 3878 to / à 3894
are withheld pursuant to section
sont retenues en vertu de l'article

69(1)(g) re: (f)

of the Access to Information Act
de la Loi sur l'accès à l'information

s.20(1)(c)
s.21(1)(b)

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Dozie, Juachi

From: Brekke, Heather
Sent: August-28-18 1:21 PM
To: Jones, Lisa Ann; Harber, Lee
Subject: FW: [redacted] concerns regarding proposed critical habitat for Southern Resident Killer Whales
Attachments: [redacted]

Fyi, in case either of you get tasked [redacted]

From: Webb, Cheryl
Sent: August-28-18 1:15 PM
To: Leslie, Karen; Thomson, Andrew; Brekke, Heather; Davis, Neil
Subject: FW: Ditidaht First Nation concerns regarding proposed critical habitat for Southern Resident Killer Whales

FYI...

[redacted]

Pages 3896 to / à 3901
are withheld pursuant to sections
sont retenues en vertu des articles

21(1)(b), 20(1)(c)

of the Access to Information Act
de la Loi sur l'accès à l'information

Pages 3902 to / à 3933

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69(1)(g) re: (e), 69(1)(g) re: (a)

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de la Loi sur l'accès à l'information

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-28-18 10:57 AM
To: Cottrell, Paul; Harber, Lee; Scott, Paul G
Subject: RE: SRKW Update Note

Great, thanks Paul. Most appreciated.

From: Cottrell, Paul
Sent: Monday, August 27, 2018 3:11 PM
To: Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>
Subject: Re: SRKW Update Note

Hi Kendra,
NOAA's update last night was that they had no update as J-pod has not been seen for three days. I think their response team is on stand-by until J50 observed in in-shore waters. As soon as I hear anything new, I'll let you know.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Moore, Kendra
Sent: Monday, August 27, 2018 11:18 AM
To: Cottrell, Paul; Harber, Lee; Scott, Paul G
Subject: SRKW Update Note

Hi all,

Attached is today's SRKW update note. Thanks to Paul C. for providing the information. If you could review and approve that would be great.

Two quick clarifications, I assume there is no news on NOAA since J-pod is presumed offshore, and any updates on J35?

Thanks so much,

Kendra

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-28-18 11:04 AM
To: Cottrell, Paul; Harber, Lee
Subject: RE: SRKW Update Note

Hi all,

Just wondering if there is any update today on J-pod, NOAA plans or SRKW in general to brief up. I know there was a new article from CBC today that senior management was asking about. Although I don't think it poses anything new.

Kendra

From: Cottrell, Paul
Sent: Monday, August 27, 2018 3:11 PM
To: Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>
Subject: Re: SRKW Update Note

Hi Kendra,
NOAA's update last night was that they had no update as J-pod has not been seen for three days. I think their response team is on stand-by until J50 observed in in-shore waters. As soon as I hear anything new, I'll let you know.
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Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Moore, Kendra
Sent: Monday, August 27, 2018 11:18 AM
To: Cottrell, Paul; Harber, Lee; Scott, Paul G
Subject: SRKW Update Note

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Two quick clarifications, I assume there is no news on NOAA since J-pod is presumed offshore, and any updates on J35?

Thanks so much,

Kendra

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-28-18 12:52 PM
To: Harber, Lee; Scott, Paul G; Cottrell, Paul
Subject: SRKW Update Note
Attachments: MECTS-#3949687-v11-IN-Southern_Resident_Killer_Whale_Update.docx

Hi all,

Attached is today's SRKW update note. Please let me know if there are any comments or changes.

Thanks for your continued input on all things SRKW.

Kendra

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Southern Resident Killer Whale Update

(August 28, 2018 – 3:30 EDT)

Issues: The deteriorating health condition of Southern Resident Killer Whale (SRKW) J50 of SRKW J-pod has prompted the U.S. National Oceanic and Atmospheric Administration (NOAA) to propose an emergency action plan to treat her. The response team located J50 on Thursday, August 9th and began sampling and treatment.

Update:

- J, K and L-pod members were sighted by DFO yesterday August 27th at 14:30 PDT off west coast Vancouver Island, despite foggy conditions.
- The animals were very spread out only certain individuals of all pods were sighted; however, this did not include J50 or J35.
- DFO issued an amended Authorization to Disturb Marine Mammals to NOAA on Friday August 24th to include the following treatments for J50: anti-parasitic treatment via a pole syringe or remote dart delivery, and the use of collared needles on darts to help the dart adhere to the whale.
    - The administration of anti-parasitic treatment has not been attempted, as J50 has not been re-sighted since Friday August 24th.
    - Currently, NOAA is authorized to conduct sampling of J50, including breath, fecal, mucus and skin; visual veterinary health assessment; provide antibiotic treatment via pole syringe or remote delivery; anti-parasitic treatment via a pole syringe or remote dart delivery; and the use of collared needles on darts to help the dart adhere to the whale.
- NOAA will be taking a temporary pause from the treatment of J50 from Thursday August 30th to September 5th.
- The goal will be to resume treatment of J50 when NOAA response capacity returns on Sept. 5th, including antibiotic treatment, anti-parasitic treatment, photogrammetry and collection of samples.
- J50's condition and treatment remains a focus in the media, including discussions of her poor body condition and treatment plans going forward.

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-28-18 11:36 AM
To: Moore, Kendra; Harber, Lee; Davis, Neil; Thomson, Andrew
Subject: RE: SRKW Update Note

Hi Kendra,
Just received an update, our DFO contractor/researcher who located J, K and L pod members in very difficult fog conditions yesterday at 14:30 off the West Coast of Vancouver Island. The animals were very spread out and he only spotted certain members of J,K and L pods. No mention of J50 or J35. No updates today on sightings of J, K and L.
Cheers,
Paul

From: Moore, Kendra
Sent: August-28-18 11:04 AM
To: Cottrell, Paul; Harber, Lee
Subject: RE: SRKW Update Note

Hi all,

Just wondering if there is any update today on J-pod, NOAA plans or SRKW in general to brief up. I know there was a new article from CBC today that senior management was asking about. Although I don't think it poses anything new.

Kendra

From: Cottrell, Paul
Sent: Monday, August 27, 2018 3:11 PM
To: Moore, Kendra <Kendra.Moore@dfo-mpo.gc.ca>; Harber, Lee <Lee.Harber@dfo-mpo.gc.ca>; Scott, Paul G <Paul.G.Scott@dfo-mpo.gc.ca>
Subject: Re: SRKW Update Note

Hi Kendra,
NOAA's update last night was that they had no update as J-pod has not been seen for three days. I think their response team is on stand-by until J50 observed in in-shore waters. As soon as I hear anything new, I'll let you know.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Moore, Kendra
Sent: Monday, August 27, 2018 11:18 AM
To: Cottrell, Paul; Harber, Lee; Scott, Paul G
Subject: SRKW Update Note

Hi all,

Attached is today's SRKW update note. Thanks to Paul C. for providing the information. If you could review and approve that would be great.

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Two quick clarifications, I assume there is no news on NOAA since J-pod is presumed offshore, and any updates on J35?

Thanks so much,

Kendra

s.21(1)(a)

s.21(1)(b)

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Wong, Eva

From: Thomson, Andrew
Sent: August-29-18 3:27 PM
To: Brekke, Heather; Jones, Lisa Ann; Harber, Lee
Subject: FW: SRKW Documents
Attachments: RKW aRS backgrounder.docx; Notification of Publication of the proposed Amended Recovery Strategy fo....docx; SRKW aRS draft Phone Call Listv.2.docx

[redacted]

Andrew J L Thomson

Regional Director | Directeur Régionale
Fisheries Management Branch | Direction de la gestion des pêches

From: Kahn, Zoe
Sent: Wednesday, August 29, 2018 3:24 PM
To: daniel.watson@pc.gc.ca; Pham, Thao <thao.pham@tc.gc.ca>; Stephen Lucas <stephen.lucas@canada.ca>; Keenan, Michael <michael.keenan@tc.gc.ca>
Cc: Morel, Philippe <Philippe.Morel@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>; Hunt, Erin (PC) <erin.hunt@canada.ca>; White, Belinda (EC) <belinda.white@canada.ca>; Little, Jennifer <jennifer.little@tc.gc.ca>; Blewett, Catherine <Catherine.Blewett@dfo-mpo.gc.ca>
Subject: RE: SRKW Documents

Hi all,

On behalf of Catherine, please find attached the revised documents and an updated phone list.

We are in the midst of confirming a release date of Tuesday, September 4th.

[redacted]

Please don't hesitate to reach out with any questions.

Thanks!

Zoe

Zoe Kahn
DMO/CSM
(613) 993-9226

From: Blewett, Catherine
Sent: Wednesday, August 29, 2018 12:44 PM
To: daniel.watson@pc.gc.ca; Pham, Thao <thao.pham@tc.gc.ca>; Stephen Lucas <stephen.lucas@canada.ca>; Keenan,

s.21(1)(a)
s.21(1)(b)
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Michael <michael.keenan@tc.gc.ca>
Cc: Kahn, Zoe <Zoe.Kahn@dfo-mpo.gc.ca>; Morel, Philippe <Philippe.Morel@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: Re: SRKW Documents

Thanks Daniel. Will have folks amend.

Sent from my BlackBerry 10 smartphone on the Bell network.

From: daniel.watson@pc.gc.ca
Sent: Wednesday, August 29, 2018 9:16 AM
To: Blewett, Catherine; Pham, Thao; Stephen Lucas; Keenan, Michael
Cc: Kahn, Zoe; Morel, Philippe; Thomson, Andrew
Subject: Re: SRKW Documents

Catherine,

[redacted]

From: Blewett, Catherine
Sent: Tuesday, August 28, 2018 18:11
To: Pham, Thao; Stephen Lucas ; Keenan, Michael; Watson, Daniel (PC)
Cc: Kahn, Zoe; Morel, Philippe; Thomson, Andrew
Subject: Re: SRKW Documents

Hi Thao

[redacted]

s.21(1)(a)

s.21(1)(b)

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Thanks
C

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Pham, Thao
Sent: Tuesday, August 28, 2018 6:09 PM
To: Blewett, Catherine; Stephen Lucas; Keenan, Michael; Watson, Daniel (PC)
Cc: Kahn, Zoe; Morel, Philippe; Thomson, Andrew
Subject: RE: SRKW Documents

Catherine,

[redacted]

Thao

From: Blewett, Catherine [mailto:Catherine.Blewett@dfo-mpo.gc.ca]
Sent: Tuesday, August 28, 2018 5:13 PM
To: Stephen Lucas <stephen.lucas@canada.ca>; Keenan, Michael <michael.keenan@tc.gc.ca>; Pham, Thao <thao.pham@tc.gc.ca>; Watson, Daniel (PC) <daniel.watson@pc.gc.ca>
Cc: Kahn, Zoe <Zoe.Kahn@dfo-mpo.gc.ca>; Morel, Philippe <Philippe.Morel@dfo-mpo.gc.ca>; Thomson, Andrew <Andrew.Thomson@dfo-mpo.gc.ca>
Subject: Fw: SRKW Documents
Importance: High

Hi there

Documents as discussed this morning.

[redacted]

C

Pages 3943 to / à 3944
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21(1)(b), 21(1)(a)

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s.19(1)

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Southern Resident Killer Whale: amended Recovery Strategy Draft phone call list

List developed with consideration of SRKW Advisory group participants, potentially affected First Nations, and those who responded via letter to the external review of the amended Recovery Strategy.

*Those with an asterisk sit on the SRKW advisory board. If no name provided (blank), number is a general reception line. If telephone cell blank, we have not found direct number.

Name	Affiliation	Phone Number	Caller	Contacted (details: call completed? Discussion held or VM)
Indigenous groups/representatives				
	UBC		DFO - L. Harber	
	First Nations Summit		DFO - A. Thomson	
	FNFC		DFO - L. Harber	
	FNFC		DFO - L. Harber	
	FNFC		DFO - A. Thomson	
	Maa-nulth (also Uchucklesaht Tribe)		DFO – TBD (senior mgmt.)	
	Maa-nulth Joint Fisheries Committee		DFO – A. Thomson	
	Nuu-chah-nulth Tribal Council		DFO - L Jones	
	Pacheedaht First Nation		DFO – TBD (senior mgmt.)	
	Ditidaht First Nation		DFO – TBD (senior mgmt.)	
	Secretariat of the Haida Nation (note NRKW specific)		DFO – Rebecca Reid	
NGOs				
	Raincoast Conservation Foundation		DFO C Blewett	
	Georgia Strait Alliance		DFO C Blewett	
	WWF Canada		DFO - H Brekke	
	David Suzuki Foundation		DFO C Blewett	
	Natural Resources Defence Council		DFO - H Brekke	
	Vancouver Aquarium [Oceans Wise / CORI Team]		DFO - H Brekke	
Shipping Industry				
	Port of Vancouver		TC – TBD	
	Shipping Federation of Canada		TC – TBD	
	Chamber of Shipping		TC – TBD	

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s.19(1)

Southern Resident Killer Whale: amended Recovery Strategy Draft phone call list

	Canadian Ferry Association		TC – TBD	
Fishing Sectors				
	Sport Fishing Advisory Board		DFO - A. Thomson	
	BC Seafood Alliance		DFO - A. Thomson	
Whale Watching				
	Pacific Whale Watching Association		DFO - A. Thomson	
Provincial Government				
Mark Zacharias*	Ministry of Environment and Climate Change Strategy	250 387-5429	DFO - C Blewett	
Jennifer McGuire (alternate)*	Environmental Sustainability Division	778 698-8521	DFO – A. Thomson	
Municipal and Regional Government				
	Metro Vancouver Regional District		ECCC- Mary-Ann Spicer	
	District of Ucluelet		DFO - Rebecca Reid	
Other				
	BC Chamber of Commerce		DFO - TBD (senior mgmt.)	
	Port Renfrew Chamber of Commerce		DFO – TBD (senior mgmt.)	
	West Coast Aquatic		DFO - L Jones	

Pages 3947 to / à 3948

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Dozie, Juachi

From: Brekke, Heather
Sent: August-29-18 8:21 AM
To: Busby, Corina
Subject: RE: A RS for RKW

Hi Corina,

Here you go:

The *Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada* was finalized in 2008 and identified two areas of partial critical habitat (CH), which was legally protected by SARA Critical Habitat Order (CHO) in 2009. A schedule of studies was included in the 2008 Recovery Strategy to further identify CH areas. In 2011, minor amendments were made to clarify the attributes of the CH section.

In the current proposed aRS, the critical habitat section (Section 7) was updated to identify two additional areas as proposed CH, as identified in a recent science advice report (CSAS SAR 2017/011): 1) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (important for both NRKW and SRKW); and 2) waters of west Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit (important for NRKW). Further, it provides additional clarification of the functions, features, and attributes for both new and existing CH. In addition, minor updates were made regarding background information and formatting; however, changes to content in other sections were not considered.

From: Busby, Corina
Sent: August-29-18 7:35 AM
To: Brekke, Heather
Subject: A RS for RKW

Hi Heather
Would you have a short summary of the changes that have been made in the amended recovery strategy already prepared? TC is asking us for a quick synopsis of the changes between the 2011 version and the newly proposed.
Corina

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Wong, Eva

From: Jones, Lisa Ann
Sent: August-29-18 10:55 AM
To: Brekke, Heather
Subject: [redacted]
Attachments:

Hi Heather – I don't know what happened but this email that I sent with the crosswalk comparison does not appear to have gone through to you.

[redacted]

Lisa

Lisa Jones, PhD
Species Recovery Planner, Species at Risk Program
Fisheries and Oceans Canada | Pêches et Océans Canada
LisaAnn.Jones@dfo-mpo.gc.ca
Tel: 604-666-2792

Pages 3951 to / à 3955

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69(1)(g) re: (e), 69(1)(g) re: (a)

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s.69(1)(g) re: (a)

s.69(1)(g) re: (e)

Dozie, Juachi

From: Brekke, Heather
Sent: August-29-18 10:54 AM
To: Kennedy, Eddy
Subject: [redacted]
Attachments:

For our discussion at 11am

Heather Brekke
Species at Risk Marine Team Lead
Resource Management | Gestion des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
heather.brekke@dfo-mpo.gc.ca
Tel: 604-666-2009

Pages 3957 to / à 3961

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69(1)(g) re: (e), 69(1)(g) re: (a)

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-29-18 12:29 PM
To: Cottrell, Paul; Hall, Patt; Rivierre, Antoine; Elliott, Isabelle; Bieren, Stacey; Kean, Jackie
Cc: McRory, Jody
Subject: Section 38 Example
Attachments: NOAA_SECTION_38_AUTHORIZATION_AUG_9_FINAL.doc

Hi everyone,

I appreciated your input on the section 38 today. Hopefully we will have a clear and functional final package soon. In the meantime, attached is the section 38 for NOAA from Pacific region to see how it was applied.

I should have the revised section 38 package for you soon!

Thanks again,

Kendra Moore

Senior Fisheries and Aquaculture Management Officer |
Agente Principale, Gestion des pêches et de l'aquaculture
Integrated Resource Management | Gestion intégrée des ressources
Fisheries and Oceans Canada | Pêches et Océans Canada
Kendra.moore@dfo-mpo.gc.ca
Tel: *New* 613-290-2344

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039, KILLER WHALE

AUTHORIZATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL

PURSUANT TO SECTION 38 OF THE *MARINE MAMMAL REGULATIONS*, SECTION 52 OF THE *FISHERY (GENERAL) REGULATIONS*, AND SECTION 74 OF THE *SPECIES AT RISK ACT*, THIS AUTHORIZATION IS HEREBY GIVEN TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION TO DISTURB A MARINE MAMMAL AND TAKE BIOLOGICAL SAMPLES OF A MARINE MAMMAL. THE AUTHORIZATION IS VALID ANYWHERE IN CANADIAN FISHERIES WATERS IN THE PACIFIC OCEAN WHERE FISHERIES AND OCEANS CANADA (DFO) ADMINISTERS THE AQUATIC RESOURCES AND OCEAN SPACE.

THE AUTHORIZATION IS VALID ONLY IN ACCORDANCE WITH THE FOLLOWING CONDITIONS SPECIFIED PURSUANT TO SUBSECTION 38(2) OF THE *MARINE MAMMAL REGULATIONS*:

1. THE OPERATIONS AUTHORIZED UNDER THIS AUTHORIZATION WILL INCLUDE THE FOLLOWING:

I) INTERACTING WITH A MARINE MAMMAL INCLUDING KILLER WHALES FOR THE PURPOSES OF;

1. RESPIRATORY SAMPLES WILL BE COLLECTED VIA PETRI DISHES MOUNTED ON THE END OF A CARBON FIBER POLE HELD JUST OVER THE BLOWHOLE. THE VESSEL CLOSELY APPROACHES THE WHALE TO WITHIN THE REACH OF THE POLE (5 METERS OR LESS), PERPENDICULAR TO THE WHALE, AND THE POLE IS LOWERED OVER THE BLOWHOLE TO CATCH THE EXPIRED AIR. RESPIRATORY SAMPLES TAKEN WILL BE ANALYZED FOR POTENTIAL PATHOGENS AND OTHER HEALTH INDICATORS USING CYTOLOGY, CULTURE AND MOLECULAR METHODS.

2. FECAL SAMPLES WILL BE COLLECTED OPPORTUNISTICALLY WHENEVER POSSIBLE WHEN VISUALLY DETECTED FLOATING ON THE WATER. FECAL SAMPLES COLLECTED THIS WAY CAN YIELD ANAYLSES OF NUTRITION, HORMONES (E.G., STRESS, REPRODUCTIVE), TOXINS, AND DNA (TO IDENTIFY SUBJECT WHALE AND PREY SPECIES). SMALL FECAL SAMPLES WILL BE COLLECTED ON STERILE GAUZE SEALED IN ZIP LOCKS AND PLACED IMMEDIATELY IN COOL STORAGE. LARGER FECAL SAMPLES WILL BE COLLECTED IN TUBES AND IMMEDIATELY PLACED IN A COOLER.
   NOTE: WHILE ALL EFFORTS WILL BE MADE TO COLLECT FECES FROM J-50, IDENTIFICATION OF WHICH ANIMAL DEFECATED IS NOT ALWAYS IMMEDIATELY POSSIBLE IN THE FIELD, AND ANY AVAILABLE SAMPLE WILL BE COLLECTED.

3. MUCUS SAMPLES WILL BE COLLECTED OPPORTUNISTICALLY WHENEVER POSSIBLE WHEN VISUALLY DETECTED FLOATING ON THE WATER. MUCUS SAMPLES CAN YIELD ANALYSES OF HORMONES AND PATHOGENS, AMONG OTHERS. MUCUS SAMPLES WILL BE COLLECTED ON STERILE GAUZE AND PLACED IN COLD STORAGE.
   NOTE: WHILE ALL EFFORTS WILL BE MADE TO COLLECT MUCUS FROM J-50, IDENTIFICATION OF WHICH ANIMAL THE MUCUS IS FROM MAY NOT ALWAYS BE IMMEDIATELY POSSIBLE IN THE FIELD, AND ANY AVAILABLE SAMPLE WILL BE COLLECTED.

4. IF SKIN DISCOLORATIONS OR ABNORMALITIES ARE OBSERVED (AS HAS BEEN PREVIOUSLY NOTED CAUDAL TO THE BLOWHOLE AND ON THE FLUKES), SKIN SAMPLES WILL BE OBTAINED THROUGH A ROUGHENED COLLECTOR (DISH SCRUBBIE OR SIMILAR) ON THE END OF A 5 M POLE. THE VESSEL CLOSELY APPROACHES THE WHALE TO WITHIN THE REACH OF THE POLE (5 METERS OR LESS), PERPENDICULAR TO THE WHALE, AND THE POLE IS LOWERED INTO CONTACT WITH

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THE DISCOLORED SKIN. SKIN SCRAPE SAMPLES WILL BE ANALYZED TO IDENTIFY POTENTIAL PATHOGENS.

5. VETERINARY HEALTH ASSESSMENT IS CONDUCTED VISUALLY BY A VETERINARIAN, WITH PHOTO AND VIDEO DOCUMENTATION. THIS ASSESSMENT WILL LIKELY BE CONDUCTED SIMULTANEOUSLY WITH THE CLOSE APPROACHES TO COLLECT THE SAMPLES LISTED ABOVE, AND WOULD LIKELY NOT REQUIRE ADDITIONAL APPROACHES. HEALTH ASSESSMENT WILL INCLUDE OBSERVATIONS OF BODY CONDITION AND BEHAVIOR, FROM VARIOUS MARINE VESSELS, DRONE OBSERVATIONS, AND FROM SHORE (WHEN POSSIBLE). PHOTOS (HIGH RESOLUTION) AND VIDEO (1080P AND GREATER RESOLUTION) WILL BE COLLECTED FROM ALL PLATFORMS UTILIZED, AND IMAGES WILL BE USED FOR COMPARISONS AND ONGOING ASSESSMENT. BEHAVIORAL PATTERNS WILL BE MONITORED AS OFTEN AS POSSIBLE THROUGHOUT THE RESPONSE. BEHAVIORAL ETHOGRAMS MAY BE DEVELOPED FOR THIS PURPOSE WITH A DEDICATED OBSERVER COLLECTING THIS DATA FOR FUTURE ANALYSIS. PARAMETERS THAT WILL BE MONITORED AND RECORDED INCLUDE:
   - RESPIRATORY RATE (# RESPIRATIONS/5 MINUTES)
   - BLOW ODOR
   - DEFECATION FREQUENCY
   - POSITION AND DISTANCE RELATIVE TO J16 (OR OTHER CLOSELY ASSOCIATED POD MEMBERS)
   - FORAGING ACTIVITY; % TIME SPENT LOGGING

6. INITIAL MEDICAL TREATMENT VIA DELIVERY OF ANTIBIOTICS BY INJECTION, EITHER VIA POLE SYRINGE OR REMOTE DELIVERY DART SYSTEM. INJECTIONS WILL BE ADMINISTERED INTO THE EPAXIAL OR OTHER LARGE MUSCLE MASS. NEEDLE LENGTH WILL BE APPROXIMATELY 2". ALL INJECTIONS WILL BE SUPERVISED BY A VETERINARIAN.
   MEDICATIONS LIST IN ORDER OF PRIORITY (AS ADVISED BY VETERINARY TEAM). THE ANTIBIOTICS ON THIS LIST ARE INTENDED TO ADDRESS THE RANGE OF BACTERIAL INFECTIONS J50 IS SUSCEPTIBLE TO.

   - 2000-3000MG CONVENIA, SQ OR IM ONCE (600KG X 5 MG/KG) - ONE DOSE WOULD PROVIDE 7-14 DAYS EFFICACY; OR
   - 2000-3000 MG EXCEDE SQ OR IM ONCE (600KG X 5 MG/KG) – ONE DOSE WOULD PROVIDE 5-10 DAYS EFFICACY

   *ANTIBIOTIC DRUG CHOICE MAY CHANGE BASED ON DIAGNOSTIC FINDINGS. ANY NEW DRUG CHOICES & DOSAGES WILL BE PROVIDED TO DFO AS NEEDED PRIOR TO USE.

II) APPROACHING A KILLER WHALE WITH A VEHICLE WITHIN A DISTANCE OF LESS THAN 200 METRE DISTANCE;

III) DOCUMENTATION AND PHOTOGRAPHY OF MARINE MAMMALS;

IV) THE COLLECTION OF ANY BIOLOGICAL SAMPLES REQUESTED FROM FISHERIES AND OCEANS CANADA.

1. COLLECTION OF BREATH/BLOW SAMPLE

2. COLLECTION OF FECAL SAMPLE

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3. COLLECTION OF OTHER SAMPLES OPPORTUNISTICALLY AVAILABLE (E.G., MUCUS AND SKIN)

4. IF SKIN DISCOLORATION IS NOTED, COLLECTION OF SKIN SCRAPINGS FROM DISCOLORED AREA

5. COMPLETION OF A VISUAL VETERINARY HEALTH ASSESSMENT AND PHOTO/VIDEO DOCUMENTATION

6. PROVIDING ANTIBIOTIC TREATMENT FROM THE NWFSC BOAT VIA POLE SYRINGE OR REMOTE DELIVERY.

ALL SAMPLES WILL BE COLLECTED BY A RESPONSE TEAM ON A SINGLE BOAT (A NOAA VESSEL). THE COMPOSITION OF THE TEAM WILL VARY DEPENDING UPON THE DAY, BUT A COMPLETE LIST OF POTENTIAL PERSONNEL IS LISTED.

2. THE AUTHORIZED PERSONNEL FOR THE ABOVE OPERATIONS SHALL BE AS FOLLOWS:

LEAD DR. TERRI ROWLES,
THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

RESPONSE TEAM MEMBERS

DR. JOE GAYDOS (SEADOC) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. JIM MCBAIN (SEA WORLD) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. HENDRIK NOLLENS (SEA WORLD) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. MARTIN HAULENA (VANCOUVER AQUARIUM) HEALTH ASSESSMENT INCLUDING DIAGNOSTICS AND MEDICAL TREATMENT

DR. BRAD HANSON (NOAA) SAMPLE COLLECTION AND VESSEL DRIVER

CANDICE EMMONS (NOAA) SAMPLE COLLECTION AND VESSEL DRIVER

JEFF FOSTER (WHALE SANCTUARY PROJECT) SAMPLE COLLECTION AND VESSEL DRIVER

KATY FOSTER (WHALE SANCTUARY PROJECT) SAMPLE COLLECTION AND VESSEL DRIVER

TREVOR FOSTER (RESEARCH TECH) SAMPLE COLLECTION AND VESSEL DRIVER

*A STAFF MEMBER WILL BE IDENTIFIED FOR PHOTO AND/OR VIDEO DOCUMENTATION.

ACTIVITIES CARRIED OUT UNDER THE AUTHORITY OF THIS AUTHORIZATION SHALL ONLY BE CONDUCTED UNDER THE DIRECT SUPERVISION OF THE AUTHORIZATION HOLDER OR AUTHORIZED INDIVIDUALS AS LISTED ABOVE. THE AUTHORIZATION HOLDER IS RESPONSIBLE TO ENSURE THAT AN AUTHORIZED INDIVIDUAL IS PRESENT DURING ANY ACTIVITY AUTHORIZED UNDER THIS AUTHORIZATION.

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3. THE RESPONSE ACTIVITY SHALL TAKE PLACE IN THE WATERS OF THE PACIFIC REGION THAT ARE PARTS OF AREAS UNDER THE ADMINISTRATION OF DFO;

4. THE FOLLOWING DFO REGIONAL STAFF SHALL BE ADVISED IMMEDIATELY ON COMMENCEMENT OF ANY OPERATIONS: PACIFIC REGION: PAUL COTTRELL (604) 240-3841

5. AN INCIDENT REPORT SHALL BE MADE DETAILING SPECIES IDENTIFICATION, EFFORTS MADE TO SAVE THE ANIMAL, CONDITION OF THE ANIMAL AT THE COMMENCMENT AND AT THE END OF THE OPERATON, LOCATION (COORDINATES) OF THE OPERATION, NAMES OF ALL INVOLVED IN THE OPERATION, ANY OTHER OBSERVATIONS RELEVANT TO INCIDENT;

6. A QUARTERLEY REPORT INCLUDING LOCATIONS, SPECIES, NUMBERS AND OBSERVATIONS SHALL BE PROVIDED TO DFO PACIFIC REGION REGIONAL COORDINATOR:
PAUL COTTRELL, PAUL.COTTRELL@DFO-MPO.GC.CA

7. THAT A COPY OF THIS AUTHORIZATION SHALL BE CARRIED BY ALL PERSONNEL ENGAGED IN THE RESPONSE OPERATIONS. GOVERNMENT ISSUED IDENTIFICATION DOCUMENTS ARE REQUIRED FOR ANYONE ACTING UNDER THE AUTHORITY OF THIS AUTHORIZATION. THE AUTHORIZATION AND ANY PERSON WORKING UNDER ITS AUTHORITY MUST BE AVAILABLE FOR INSPECTION UPON REQUEST BY A FISHERY OFFICER OR FISHERY GUARDIAN;

8. THE AUTHORIZATION HOLDER MUST HAVE APPROPRIATE, CURRENT LIABILITY INSURANCE AND/OR APPROPRIATE, CURRENT WORKERS COMPENSATION COVERAGE IN PLACE THAT COVERS ACTIVITIES UNDERTAKEN IN ALL PROVINCES COVERED BY THIS AUTHORIZATION THROUGHOUT THE DURATION OF THE CONTRACT. COPIES OF THIS DOCUMENTATION MUST BE PROVIDED TO THE DFO IN ADVANCE OF COMMENCEMENT OF THE AUTHORIZED ACTIVITIES.

9. THE AUTHORIZATION HOLDER AGREES THAT IT IS FULLY LIABLE FOR ANY DAMAGES THAT IT CAUSES TO ANY THIRD PARTY IN CONNECTION WITH ACTIVITIES AUTHORIZED BY THE AUTHORIZATION, REGARDLESS OF WHETHER THE THIRD PARTY MAKES ITS CLAIM AGAINST CANADA OR THE AUTHORIZATION HOLDER. IF CANADA IS REQUIRED, AS A RESULT OF JOINT AND SEVERAL LIABILITY, TO PAY A THIRD PARTY IN RESPECT OF DAMAGES CAUSED BY THE AUTHORIZATION HOLDER, THE AUTHORIZATION HOLDER MUST REIMBURSE CANADA FOR THAT AMOUNT.

10. IF ACTIVITIES AUTHORIZED BY THIS AUTHORIZATION ARE CONDUCTED WHILE ON A DFO VESSEL, THE AUTHORIZATION HOLDER WILL ENSURE THAT PERSONS ENGAGED IN THIS ACTIVITY WEAR APPROPRIATE SAFETY EQUIPMENT DURING THE ENTIRE LENGTH OF THE ACTIVITY. SAFETY EQUIPMENT INCLUDES, BUT MAY NOT BE LIMITED TO, PERSONAL PROTECTION EQUIPMENT THAT MEETS CANADIAN SAFETY STANDARDS.

11. THIS AUTHORIZATION AND CONDITIONS CANCEL AND REPLACE ANY PREVIOUS AUTHORIZATION AND CONDITION ISSUED TO THE US NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION FOR THE PURPOSE OF CONDUCTING RESPONSE OPERATIONS;

13. THIS AUTHORIZATION IS VALID FROM DATE OF ISSUANCE TO OCTOBER 31, 2018;

14. THE ISSUANCE OF THIS AUTHORIZATION IMPLIES NO COMMITMENT BY THE MINISTER OR THE DEPARTMENT TO REISSUE THE AUTHORIZATION.

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s.19(1)

Khanna, Sukriti

From: Peter Hamilton <[redacted]
Sent: August-29-18 11:15 AM
To: justin.trudeau@parl.gc.ca; Catherine.McKenna@parl.gc.ca; marc.garneau@parl.gc.ca; Johnathan.Wilkinson@parl.gc.ca; dominic.leblanc@parl.gc.ca; andrew.weaver.mla@leg.bc.ca; elizabeth.may.c1a@parl.gc.ca; premier@gov.bc.ca; Patty_Murray@murray.senate.gov; Maria_Cantwell@cantwell.senate.gov; Cottrell, Paul; [redacted] KillerWhale.Help@noaa.gov; Thornton, Sheila
Subject: Please Enact Emergency Orders Now!

August 29, 2018

Open Letter

Re: Please Enact Emergency Measures Now!

To: justin.trudeau@parl.gc.ca; Catherine.McKenna@parl.gc.ca; marc.garneau@parl.gc.ca; Johnathan.Wilkinson@parl.gc.ca; dominic.leblanc@parl.gc.ca; andrew.weaver.mla@leg.bc.ca; elizabeth.may.c1a@parl.gc.ca; premier@gov.bc.ca; Patty_Murray@murray.senate.gov; Maria_Cantwell@cantwell.senate.gov; Governor Jay Inslee
CC: Paul.Cottrell@dfo-mpo.gc.ca; [redacted] KillerWhale.Help@noaa.gov; Sheila.Thornton@dfo-mpo.gc.ca;

Saving J50 must not put all orcas at risk. The Southern Resident Killer Whales (SRKW) must not be treated like lab guinea pigs that can result in unknown threats to them. Species at Risk Emergency Orders must include the immediate moratoriums on salmon fishing and increased enforcement to stop boat harassment. The lack of salmon caused by the broken ocean food chain and vessel harrassment continues (In 2018 Lifeforce has reported numerous boaters not adhering to the 200 meter law). Our goal must be to immediately increase protecting and restoring natural habitats.

Read our Petition with over 165,000 supporters. Save the Orca Families Now!
https://www.change.org/p/dominic-leblanc-and-catherine-mckenna-dominic-leblanc-parl-gc-ca-catherine-mckenna-parl-gc-ca-save-the-orca-families

Lifefeforce has urged DFO and NOAA to not put any antibiotics into the salmon. The salmon cannot be targeted to be consumed by only J50. The risk to J50 is an issue but the risks to all resident orcas must not be allowed. As we know there can be severe adverse antibiotic reactions in humans and overuse has led to "superbugs". Ototoxic drug treatments can also cause deafness. (There are five main contributing factors to hearing loss in mammals: intense chronic noise, transient intense noise (e.g. explosions), age-related hearing loss (presbycusis), congenital hearing impairment, and ototoxic drug treatment. http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0013824)

I would also like to suggest that any direct administration of specific type of antibiotics to J50 should have been determined after the test results find any life-threatening health issues.
Further, the use of "collared darts" to administer antibiotics can open pathways for life threatening infections. This happen with the use of satellite "tags" (sharp barb-like blades that penetrate the skin) that led to the death of the SRKW orca L95 in March 2016. Has NOAA to still halted all such satellite "tags"for at least

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the SRKWs? As one of the three main threats to SRKWs is pollution using any procedures that risk such infection must not be supported. (Note: such "tagging" can be replaced by the non invasive use of the vast system of hydrophones to follow their travels.)
See Lifeforce Petition: Stop Barbaric Orca Satellite "Tags" and Skin Biopsies! Petitioning TheSec@DOC.gov > https://www.change.org/p/thesec-doc-gov-stop-barbaric-orca-satellite-tags-and-skin-biopsies

The NOAA and DFO teams are faced with doing what is in the best interests of the SRKWs. As I have always said that orcas must not be studied to death with unpredictable experiments. Direct aid with specific antibiotics for J50 may help but any experiments, such as releasing salmon with antibiotics, may harm other SRKWs.

Please Enact Emergency Measures Now!

In Respect For All Life,

Peter Hamilton

Lifeforce

s.21(1)(a)
s.21(1)(b)

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Khanna, Sukriti

From: Greene, Annely
Sent: August-29-18 9:59 AM
To: Cottrell, Paul
Subject: 2018-27 Rowles J50 Licence Draft
Attachments: 2018-27 Rowles J50 Licence Draft.pdf; MM- SARA LICENCE APPLICATION_MMHSRP_amendment August 22 2018.docx; MMHSRP application Study Techniques amended Aug 22 2018.docx

Here is the first draft of the licence, please review and add your comments/edits.

[redacted]

Annely Greene
Marine Mammal Program Officer
Fisheries & Oceans Canada
Suite 200 - 401 Burrard Street
Vancouver, B.C. V6C 3S4
Telephone: 604-666-0071
Annely.Greene@dfo-mpo.gc.ca

Pages 3970 to / à 3977

are withheld pursuant to sections

sont retenues en vertu des articles

21(1)(b), 21(1)(a)

of the Access to Information Act

de la Loi sur l'accès à l'information

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Khanna, Sukriti

From: Moore, Kendra
Sent: August-29-18 9:41 AM
To: Cottrell, Paul; Harber, Lee; Scott, Paul G
Subject: SRKW Update Note
Attachments: MECTS-#3949687-v12-IN-Southern_Resident_Killer_Whale_Update.docx

Hi everyone,

Attached is today's SRKW update note. Let me know if there is any additional information or comments.

Thanks,

Kendra

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Southern Resident Killer Whale Update

(August 29, 2018 – 12:30 EDT)

Issues: The deteriorating health condition of Southern Resident Killer Whale (SRKW) J50 of SRKW J-pod has prompted the U.S. National Oceanic and Atmospheric Administration (NOAA) to propose an emergency action plan to treat her. The response team located J50 on Thursday, August 9th and first began treatment. Monitoring efforts are ongoing, as well as treatment.

Update:

- K and L-pod members were sighted by DFO yesterday August 28th off west coast of Vancouver Island.
    - J-pod was not sighted yesterday.
    - Weather and visibility conditions were poor yesterday.
- The NOAA response team is back on standby today and will continue to have veterinary coverage for medical treatment.
    - NOAA's temporary pause from the treatment of J50 from Thursday August 30th to September 5th was avoided, as they identified Dr. Joe Gaydos as a vessel operator for this time period.
- The goal will be to resume treatment of J50 when re-sighted and conditions allow, including antibiotic treatment, anti-parasitic treatment, photogrammetry and collection of samples.

s.19(1)

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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-29-18 9:05 AM
To: Thomson, Andrew; Davis, Neil; Kennedy, Eddy; Thornton, Sheila; MacConnachie, Sean; Sloan, Lara; Girouard, Louise; Greene, Annely; Webb, Cheryl; Cauffope, Genevieve; Doniol-Valcroze, Thomas; Jenkins, Randy; Moore, Kendra; Scott, Paul G
Subject: Fw: Response Capacity Restored

Hi All,
NOAA has restored their operational team and are on standby if J50 returns to in-shore waters. See NOAA'S update below. K's and L's were seen yesterday afternoon by DFO off the West Coast Of Vancouver Island. J's were not observed. Weather and viewing conditions were poor.
Cheers,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Kristin Wilkinson - NOAA Federal <[redacted]>
Sent: Tuesday, August 28, 2018 7:24 PM
To: brad.hanson; Jeff Foster; Katy Foster; Joe Gaydos; Marty Haulena; Hendrik Nollens; Jennifer Olson; Taylor Shedd; Jim McBain; Candice Emmons; Jenny Atkinson; Deborah Giles, PhD; Russ Mullins
Cc: Ruth Howell; Lynne Barre; Teri Rowles; Sarah Wilkin - NOAA Federal; John Durban - NOAA Federal; Cottrell, Paul; Thornton, Sheila; Chris Yates - NOAA Federal; Mike Ford - NOAA Federal
Subject: Response Capacity Restored

Good Evening Everyone -

Dr. Joe Gaydos has offered his expertise and skills as a vessel operator so we can continue on water response if J50 were to come back to the area. I'd like to request that if anyone has sighting information in real-time (Soundwatch, DFO, UW, PWWA, etc.) to please share those sightings with Dr. Gaydos (360-914-1083 cell) so a team can be assembled quickly. We continue to have veterinary coverage for medical treatment and Joe will coordinate with the available vets and I will continue to provide a veterinary schedule for his use. Brad and Candi will be back on the island starting September 5th, their on water efforts will be focused on their d-tagging work and Jeff and Katy will be back on island around September 6th.

We will continue to try to accomplish the below goals and will continue to have 9pm debrief calls when the team is on the water with J50. If there are no sightings or updates I will try to cancel the call by 6-7pm.

Our goals continue to be;
1. Administer a full dose of Covenia (antibiotic) in U.S. or Canadian waters
2. Administer one dose of Ivermectin (dewormer) in U.S. or Canadian waters
3. Compare photogrammetry images from August 1st to next available images collected by SWFSC - U.S. waters
4. Opportunistically collect samples from J50 (primarily UW during this current operating period)

Thank you to SeaDoc for making on water response a possibility and to all of you for your continued dedication to make this effort as successful as possible.

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Please do not ever hesitate to reach out if I can be of assistance, I can always be reached on my cell phone at 206-550-6208.

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

On Mon, Aug 27, 2018 at 1:23 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Hello All,

We will have a temporary pause in our on water emergency response capacity for J50 between Thursday, August 30th and Wednesday, September 5th. Brad is off island preparing for their upcoming September field season, Candi is out of town, and Jeff and Katy need to leave the island to attend to some family obligations. With Brad, Candi, and Jeff being the most experienced vessel operators in close distance to SRKW we will temporarily pause our on water efforts to administer medical treatment. If SeaDoc would like to monitor her overall condition and document from a distance that is a possibility and our partners (UW, Soundwatch, DFO, etc.) will continue to provide information as available.

Our goals continue to be;
1. Administer a full dose of Covenia (antibiotic) in U.S. or Canadian waters
2. Administer one dose of Ivermectin (dewormer) in U.S. or Canadian waters
3. Compare photogrammetry images from August 1st to next available images collected by SWFSC - U.S. waters
4. Opportunistically collect samples from J50

Please let me know if you have any questions or concerns about this temporary pause in operations or if you have additional resources (such as experienced vessel operators) please feel free to bring them to my attention.

A huge thank you to the entire team for all of their efforts, time, and energy put towards this case to date.

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

s.21(1)(a)
s.21(1)(b)
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Khanna, Sukriti

From: Cottrell, Paul
Sent: August-29-18 10:27 AM
To: Greene, Annely
Subject: Re: 2018-27 Rowles J50 Licence Draft

Hi Annely,

[redacted]

Thanks,
Paul

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Greene, Annely
Sent: Wednesday, August 29, 2018 10:01 AM
To: Cottrell, Paul
Subject: 2018-27 Rowles J50 Licence Draft

Here is the first draft of the licence, please review and add your comments/edits. [redacted]

Annely Greene
Marine Mammal Program Officer

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Fisheries & Oceans Canada
Suite 200 - 401 Burrard Street
Vancouver, B.C. V6C 3S4
Telephone: 604-666-0071
Annely.Greene@dfo-mpo.gc.ca

003983

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s.16(2)

Dozie, Juachi

From: Harber, Lee
Sent: August-29-18 10:08 AM
To: Thomson, Andrew
Cc: Davis, Neil
Subject: FW: SRKW IMAG - Next steps
Attachments: Summary of Comments on SRKW IMAG TOR.docx

Hi Andy,

I've developed a 2 page summary of comments on the TOR and provided recommendations on how we respond to the advisory group on each one. Please have a look and after we could send this up to RR to seek her views.

Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

From: Harber, Lee
Sent: 2018–August-29 10:05 AM
To: 'Marshall, Christopher (EC) (christopher.marshall@canada.ca)'; 'Pelton, Jeff'; 'Henneman, Sonja'; Jones, Lisa Ann; 'Wong, Cecilia (EC) (cecilia.wong@canada.ca)'; 'Lafrance, Christian'; Muise, Anna-Marie (EC) (anna-marie.muise@canada.ca); Moore, Kendra
Subject: RE: SRKW IMAG - Next steps

Hi everyone,

I've developed a summary of comments received from participants on the Terms of Reference, which includes recommendations on how we could respond. Please review and provide your comments. I plan on sending this up to the RDG today to confirm direction.

I will follow up on this item next week.

Thanks
Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

From: Harber, Lee
Sent: 2018–August-28 4:28 PM
To: 'Marshall, Christopher (EC) (christopher.marshall@canada.ca)'; 'Pelton, Jeff'; 'Henneman, Sonja'; Jones, Lisa Ann; 'Wong, Cecilia (EC) (cecilia.wong@canada.ca)'; 'Lafrance, Christian'; Muise, Anna-Marie (EC) (anna-

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marie.muise@canada.ca)
Subject: RE: SRKW IMAG - Next steps

Hi Guys,

Please review attached the updated draft email to participants, which I reworded to be more inclusive for participants.

Regarding the comments from participants on the Terms of Reference (e.g. balance of representation, etc.), I will be summarizing the comments/feedback/risks on the ToR for our Regional Director General. The ToR feedback and how it was addressed will be an agenda item at the Nov. 1 meeting. We will all work together to develop a responsive for the ToR comments to support this agenda item.

As discussed on the call this morning please proceed in briefing up on approach outlined in my previous email and provide feedback on the letter by Friday. I will provide a debrief if there is any change in direction on the call next Tuesday. After that we will look to send out the email to participants for the Nov 1 meeting.

Thank you

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

From: Harber, Lee
Sent: 2018–August-28 9:41 AM
To: 'Marshall, Christopher (EC) (christopher.marshall@canada.ca)'; 'Pelton, Jeff'; 'Henneman, Sonja'; Jones, Lisa Ann; 'Wong, Cecilia (EC) (cecilia.wong@canada.ca)'; 'Lafrance, Christian'; Muise, Anna-Marie (EC) (anna-marie.muise@canada.ca)
Subject: RE: SRKW IMAG - Next steps

As discussed, please see attached: draft summary report, and ToR comments.

I will send you guys a revised copy of the email to participants later today - a few urgencies have come up and I can't get to it right now.

Lastly, I have scheduled a meeting with my regional director to discuss some of the issues we discussed on the call. I will keep everyone posted on what comes out of this discussion.

Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB:

From: Harber, Lee
Sent: 2018–August-27 10:18 AM
To: 'Marshall, Christopher (EC) (christopher.marshall@canada.ca)'; 'Pelton, Jeff'; 'Henneman, Sonja'; Jones, Lisa Ann; 'Wong, Cecilia (EC) (cecilia.wong@canada.ca)'; 'Lafrance, Christian'; Muise, Anna-Marie (EC) (anna-marie.muise@canada.ca)
Subject: SRKW IMAG - Next steps

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Hi Everyone,

Based on our discussion last week on the forward agenda I would like to propose that we keep things simple and include a brief description of the meeting structure in the follow-up (save the date) e-mail invitation to participants. We have solicited feedback from participants on a number of occasions and I think that we can safely move forward with a general structure at this point.

In the email to participants, we would also include the draft summary report and inform participants that we will provide a more detailed agenda and materials in advance of the meeting on November 1st. In this email we would not get into detail yet on specific topics, however this would be provided closer to the meeting once we have further developed the presentations. I've attached a draft of the letter that would go out to participants from our Regional Director General in the next week or so.

Meeting structure (as described in follow-up invite attached):

I. Standing item 1: Roundtable update on actions underway & recent developments [DFO, TC, ECCC to each provide verbal updates as needed]
II. In Focus: key threat Prey Availability [DFO to develop presentations]
III. Standing item 2: Opportunities for collaboration [DFO, TC, ECCC to each provide verbal update on opportunities]
IV. Roundtable

For Part I & III, each department will identify a topic to provide a brief verbal update on an activity that they are leading.

For Part II of the meeting, we would task out and work closely with the assigned leads to develop presentations that would be at a suitable level given the range of knowledge amongst participants.

PART II - In Focus: key threat Prey Availability [Presentations]

1. Role of hatcheries to increase prey availability (DFO: Salmonid Enhancement Program)
2. Hydrophone Network and Data Collection Results (DFO Science Branch)
3. Aerial Surveillance Program: SRKW Monitoring (DFO: Conservation and Protection Branch)

We will discuss this approach, timelines and necessary approvals on our call tomorrow.

Thank you
Lee

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

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s.21(1)(a)

s.21(1)(b)

Summary of Comments on SRKW IMAG TOR

Substantive comments were received from 2 of the participants: Chamber of Shipping and Shipping Federation of Canada. No other participants provided feedback on the Terms of Reference.

Comment #1

Additional objective should be added: "Ensure a shared understanding of the existing threat-based reduction efforts/actions in order to foster a comprehensive and accurate assessment of the efficiency and fairness of threat-based mitigation measures to achieve overall recovery objectives". *[Chamber of shipping]*

Recommendation:

Comment #2

Request for more than 4 meetings, and that there is a need for 2-3 information sessions before the substantive discussions begin. *[Chamber of shipping]*

Recommendation:

Comment #3

View that prey availability is the threat of highest priority for discussion. *[Chamber of shipping]*

Recommendation:

Comment #4

There is an imbalance of representation of the various stakeholders which could result in misrepresentation of support or divergence for an issue. *[Shipping Federation of Canada]*

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s.21(1)(a)

s.21(1)(b)

Recommendation:

Comment #5

Suggestion to add the local government administrative district: Capital Regional District to the Advisory Group.

Recommendation:

s.19(1)

s.69(1)(g) re: (f)

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Dozie, Juachi

From: May-McNally, Shannan
Sent: August-30-18 12:31 PM
To: christine.hurst@pc.gc.ca
Cc: McMillan, Christie; Wilson, Christy (NCR); 'Genevieve.Goggin@pc.gc.ca'; Brekke, Heather; Jones, Lisa Ann; Osborne, Michelle; alana.plummer@pc.gc.ca
Subject: RE: Updated SRKW and NRKW [redacted] - A4 wording
Attachments: [redacted]

Hi Chris,

I have attached some updates to the wording in A4 based on your comments (thanks to Christie M. and Christy W. for input). Please let me know if these changes and/or explanations clarify the wording and address your comments.

Thanks,

Shannan

From: alana.plummer@pc.gc.ca [mailto:alana.plummer@pc.gc.ca]
Sent: August-29-18 3:23 PM
To: May-McNally, Shannan
Cc: McMillan, Christie; christine.hurst@pc.gc.ca; Wilson, Christy (NCR); 'Genevieve.Goggin@pc.gc.ca'; Brekke, Heather; Jones, Lisa Ann; Osborne, Michelle
Subject: Re: Updated SRKW and NRKW [redacted] - A4 wording

Hi All,

Big thanks to Shannan and the Pacific Region team for turning this around so quickly! PCA has added some comments to page 12. Even though you will only see comments from me, I've discussed these with Geneviève and Chris, so please consider the document appended here to be a roll up of PCA's comments on the new paragraph.

As well, PCA can confirm that only my Director (Tamaini) and Chris' Director (Rachel) will be signing [redacted] so the signature section does not require any updates. We're all briefed up on our side and our Directors know to expect this (and a short turnaround on the sign-off approvals).

Out of office reminder
As mentioned yesterday, [redacted] but if you need to reach me urgently, please call my cell [redacted]

Geneviève has kindly agreed to be the contact on anything related to this file that needs input from the field unit. So, for Christie and Lisa, if you do receive any confirmation about the plan for the public consultation period, Geneviève is your gal.

Shannan and Michelle, Chris will continue to be the contact on all things regulatory.

Thanks all and have a great long weekend!

Alana

Alana Plummer

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Scientifique des écosystèmes, Conservation et Gestion des Espèces
Parcs Canada / Gouvernement du Canada
30 rue Victoria (PC-03-C), 3-77, Gatineau QC J8X 0B3
alana.plummer@canada.ca / Tél: 819-420-9072

Ecosystem Scientist, Species Conservation and Management
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30 Victoria St. (PC-03-C), 3-77. Gatineau QC J8X 0B3
alana.plummer@canada.ca / Tel: 819-420-9072

Parcs Canada - 450 000 km2 de souvenirs / Parks Canada - 450 000 km2 of memories

From: "May-McNally, Shannan" <Shannan.May-McNally@dfo-mpo.gc.ca>
To: "Wilson, Christy (NCR)" <Christy.Wilson@dfo-mpo.gc.ca>, "McMillan, Christie" <Christie.Mcmillan@dfo-mpo.gc.ca>, "'alana.plummer@pc.gc.ca'" <alana.plummer@pc.gc.ca>, "christine.hurst@pc.gc.ca" <christine.hurst@pc.gc.ca>, "'Genevieve.Goggin@pc.gc.ca'" <Genevieve.Goggin@pc.gc.ca>, "Brekke, Heather" <Heather.Brekke@dfo-mpo.gc.ca>, "Jones, Lisa Ann" <LisaAnn.Jones@dfo-mpo.gc.ca>, "Osborne, Michelle" <Michelle.Osborne@dfo-mpo.gc.ca>
Date: 29/08/2018 01:23 PM
Subject: Updated SRKW and NRKW [redacted] - A4 wording

Hi everyone,

Attached is an updated version of the SRKW and NRKW [redacted] (v9, clean and track changes) with updated wording and checked boxes for section A4. Thanks to Christie M. for providing this new wording. This version also incorporates the edits from the Parks field units and some additional edits from Pacific Region. All of the new changes can be seen in the track changes version. Lastly, this version also includes [redacted]

Please let me know if additional edits are required or if you have any questions/concerns by the end of the week, if possible.

Thanks,

Shannan

Shannan May-McNally
Species at Risk Program / Programmes des espèces en péril
Fisheries and Oceans Canada / Pêches et Océans Canada
200 Kent Street / 200 rue Kent, Ottawa (ON) K1A 0E6
Shannan.May-McNally@dfo-mpo.gc.ca
Telephone / Téléphone 613-297-7044 *Note new number

[redacted]

Pages 3991 to / à 4013

are withheld pursuant to section

sont retenues en vertu de l'article

69(1)(g) re: (f)

of the Access to Information Act

de la Loi sur l'accès à l'information

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Wong, Eva

From: Busby, Corina
Sent: August-30-18 1:02 PM
To: Chiu, Scott; Young, Jessica; May-McNally, Shannan; Thorleifson, Erika; Brekke, Heather; Jones, Lisa Ann; McMillan, Christie
Subject: FW: 2018-AE-00428 // Approval of the Proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales

Just FYI – aRS signed but we are still awaiting permission to post.

From: Love, Lindsay
Sent: 2018–August-30 12:43 PM
To: Chiu, Scott; Busby, Corina; Stewart, Julie
Subject: FW: 2018-AE-00428 // Approval of the Proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales

FYI

From: Banville, Pierrette
Sent: August-30-18 12:27 PM
To: Love, Lindsay
Subject: RE: 2018-AE-00428 // Approval of the Proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales

No problem Lindsay, it has been signed by the Minister & re-assigned to AE for processing.

Thank you!
Pierrette

From: Love, Lindsay
Sent: August-30-18 12:20 PM
To: Banville, Pierrette
Subject: RE: 2018-AE-00428 // Approval of the Proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales

Hi Pierrette,

I am out, my apologies.

Best,

Lindsay

From: Banville, Pierrette
Sent: August-30-18 12:17 PM
To: Love, Lindsay
Subject: 2018-AE-00428 // Approval of the Proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales
Importance: High

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Good afternoon, could you please save your comments & close GCCMS?

Thank you!

Pierrette Banville
Correspondence Officer | Agente de correspondance
Deputy Minister's Office | Cabinet du sous-ministre
Fisheries and Oceans Canada | Pêches et Océans Canada
Telephone | Téléphone (613) 998-8150

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Brekke, Heather

From: Brekke, Heather
Sent: August-30-18 10:27 AM
To: Jones, Lisa Ann; McMillan, Christie
Cc: Wells, Caroline
Subject: FW: Signed by Minister /// 2018-AE-00428 // Memo to Minister: Approval of the Proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales
Attachments: C 2018-AE-00448 - Proposed Recovery SRKW (signed by Minister).pdf

FYI

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Richter, Julie <Julie.Richter@dfo-mpo.gc.ca>
Sent: Thursday, August 30, 2018 12:45 PM
To: Morel, Philippe; Stewart, Julie
Subject: FW: Signed by Minister /// 2018-AE-00428 // Memo to Minister: Approval of the Proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales

FYI – Minister has signed off.

From: Banville, Pierrette
Sent: August-30-18 12:19 PM
To: Villeneuve, Anne-Marie; Daspe, Caroline; Ahpiang, Melanie
Cc: Richter, Julie; Genier, Sylvie; Bilmer, Angela; Butcher, Ashley; D'Angelo, Louise-Anne; Delorme, Christopher; Gratton, Janie; Hirani, Samia; Jarjour, Jasmine; Kahn, Zoe; Khwaja, Saba; Longtin, Jean; Ryan, Sandra-Lee; Wallace, Dorothy
Subject: Signed by Minister /// 2018-AE-00428 // Memo to Minister: Approval of the Proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales

Good afternoon,

This docket has been signed by the Minister and is in AE's folder for processing. Scan attached for your convenience.

Please note it will assigned in GCCMS as soon it's unlocked by the current user.

Thank you!

Pierrette Banville
Correspondence Officer | Agente de correspondance
Deputy Minister's Office | Cabinet du sous-ministre
Fisheries and Oceans Canada | Pêches et Océans Canada
Telephone | Téléphone (613) 998-8150

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Fisheries and Oceans Canada | Pêches et Océans Canada

Deputy Minister | Sous-ministre

PROTECTED SOLICITOR-CLIENT PRIVILEGE
2018-AE-00428
EKME # 3945044

MEMORANDUM FOR THE MINISTER

Approval of the Proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales
(FOR DECISION)

SUMMARY OF ADVICE TO MINISTER

The purpose of this memo is to seek your approval to post the proposed Amended Recovery Strategy (aRS) for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada (Tab 1) on the *Species at Risk Public Registry* (the Registry) for a 60-day public comment period.

The aRS proposes two new areas as critical habitat (CH): waters off southwestern Vancouver Island, and waters of west Dixon Entrance. Within these areas, CH is restricted to where the biophysical features and attributes that support life functions are found.

Interest in the proposed aRS is high; Southern Resident Killer Whales were found to face imminent threats to their survival and recovery. Concerns raised include that expedited consultation timelines do not allow for meaningful consultation, and beliefs that the designated CH would result in immediate fishing closures on the Swiftsure and La Pérouse Banks.

Your approval is sought by August 24, 2018, so the proposed document can be posted for a 60-day public comment period by August 27, 2018.

BACKGROUND

Northern and Southern Resident Killer Whales (NRKW and SRKW) are listed under the *Species at Risk Act* (SARA) as Threatened and Endangered, respectively. You and the Minister responsible for the Parks Canada Agency are the competent ministers under SARA for these populations.

The 2008 Recovery Strategy for NRKW and SRKW identified CH based on best available science at the time (partial identification); a 2009 ministerial Critical Habitat Order (CHO) protected it. In 2011, minor amendments to the Strategy were made to clarify the attributes of the CH.

Information in a 2017 Canadian Science Advisory Secretariat Science Advisory Report allowed identification of two more areas of habitat of special importance: the waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (for NRKW and SRKW), and the waters of west Dixon Entrance, off Graham Island (for NRKW). The advice also describes the functions, features and attributes of the habitat within these areas.

DFO conducted an external review on the aRS from June 12 to July 11, 2018. All feedback was considered but did not result in substantive changes as the majority addressed concern with the process and uncertainty with respect to socioeconomic impacts or Indigenous rights, but did not provide additional information which resulted in changes to the proposed CH.

Canada

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STRATEGIC CONSIDERATIONS

[redacted]

Recreational fishers are concerned that timelines for aRS review were too short as they coincided with the fishing season, and that creation of new CH areas will lead to further fisheries restrictions. In 2018, DFO put in place fishery management measures under the *Fisheries Act* in key SRKW foraging areas overlapping with existing CH to increase prey availability and reduce disturbance from fishing vessels. The media, the Premier of BC, and local elected officials have noted these concerns. Demands were made to extend the review and delay the public comment period. Any delays will result in a failure to meet the proposed timelines to complete the aRS and the CHO. The aRS will be posted on the Registry to receive more comments.

Further, commercial, recreational and Indigenous harvesters raised concerns about the validity of the science informing the identification of the proposed CH, especially on La Pérouse Bank. The science advice includes extensive data to support the importance of Swiftsure Bank and western Dixon Entrance to RKW. La Pérouse Bank is known to be used by both populations as it is highly productive salmon habitat with documented foraging activity.

SCIENCE ADVICE

The 2017 Canadian Science Advisory Secretariat Science Advisory Report guided identification of the additional CH areas, provided a description of the functions, features and attributes of the proposed additions to RKW CH, and gave examples of human activities likely to destroy CH. Science also inputted to the aRS.

INTERDEPARTMENTAL CONSULTATIONS

The proposed aRS was developed cooperatively with and supported by the Parks Canada Agency, with input sought from Environment and Climate Change Canada, the Department of National Defence, Transport Canada, Natural Resources Canada, the Province of BC, the U.S. National Oceanic and Atmospheric Administration and the Washington State Department of Fish and Wildlife. The Province of BC provided a response letter expressing support of CH identification, but requires a socioeconomic analysis and full consultation in order to support it for legal habitat protection.

INDIGENOUS CONSULTATIONS

Sections 39(1)(d) and 45(3) of SARA require that, to the extent possible, the recovery strategy and its amendments be prepared in cooperation with every Indigenous organization that the competent minister considers will be directly affected. Input was sought from 122 coastal Indigenous groups and four Wildlife Management Boards. Teleconferences were held with the Pacheedaht and Ditidaht First Nations (FN) as well as the Nuu-chah-nulth. Responses primarily expressed concern over perceived implications to Treaty and Aboriginal Fishing Rights, potential implications to fishing activities, and that further meaningful consultation is required. Further information and an invitation to collaborate on recovery efforts were provided to Pacheedaht and

.../3

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Ditidaht following the calls. The Maa-nulth FN will be provided with the science advice and, if they choose, a further opportunity to discuss.

[redacted]

EXTERNAL CONSULTATIONS

Information was shared with stakeholders (211), other government agencies (19), and advisory boards. Approximately 690 responses were received with the majority from the recreational fishing sector, and local and regional government representatives, including the Premier of BC, expressing concerns over the timeline for consultation, implication of future management measures, and science used to identify CH. DFO is developing a plan with the Sport Fishing Advisory Board to support their participation in the next phase of consultation. Vancouver Fraser Port Authority and the Chamber of Shipping both expressed support, but requested clarification of CH thresholds. Ecojustice expressed concern over the use of the Bounding Box Approach to identify CH and timelines for establishing the CHO.

ADVICE AND RECOMMENDATIONS TO MINISTER

It is recommended that the proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada be posted on the Registry for a 60-day public comment period. Key stakeholders will be notified prior to the posting.

Catherine Blewett
Deputy Minister

Kevin Stringer
Associate Deputy Minister

AUG 2 0 2018

☒ I concur with the recommendations

☐ I do not concur with the recommendations

NOTE: Consultation & outreach to accompany release.

Jonathan Wilkinson
Minister

AUG 3 0 2018

Minister's Comments:

Attachments: (2)

1) Tab 1 - Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada [PROPOSED]
2) Tab 2 - [redacted]

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Proposed

Species at Risk Act
Recovery Strategy Series

Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada

Killer Whale

Original publication 2008
1st amendment 2011
2nd amendment 2018

Fisheries and Oceans Canada
Pêches et Océans Canada
Canada

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Recommended citation:

Fisheries and Oceans Canada. 2018. Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada [Proposed]. Species at Risk Act Recovery Strategy Series, Fisheries & Oceans Canada, Ottawa, x + 94 pp.

For copies of the recovery strategy, or for additional information on species at risk, including Committee on the Status of Endangered Wildlife in Canada (COSEWIC) Status Reports, residence descriptions, action plans, and other related recovery documents, please visit the SAR Public Registry.

Cover illustration: Graeme Ellis, Fisheries & Oceans Canada

Également disponible en français sous le titre :
« Programme de rétablissement modifié des épaulards résidents (*Orcinus orca*) du nord et du sud au Canada»

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ISBN
Catalogue no.

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Preface

The federal, provincial, and territorial government signatories under the Accord for the Protection of Species at Risk (1996) agreed to establish complementary legislation and programs that provide for effective protection of species at risk throughout Canada. Under the Species at Risk Act (S.C. 2002, c.29) (SARA), the federal competent ministers are responsible for the preparation of a recovery strategy for species listed as extirpated, endangered, or threatened and are required to report on progress five years after the publication of the final document on the Species at Risk Public Registry.

The Minister of Fisheries and Oceans and the Minister responsible for the Parks Canada Agency are the competent ministers under SARA for the Northern and Southern Resident Killer Whale and have prepared this strategy, as per section 37 of SARA. In preparing this recovery strategy, the competent ministers have considered, as per section 38 of SARA, the commitment of the Government of Canada to conserving biological diversity and to the principle that, if there are threats of serious or irreversible damage to the listed species, cost-effective measures to prevent the reduction or loss of the species should not be postponed for a lack of full scientific certainty. To the extent possible, the recovery strategy has been prepared in cooperation with Environment and Climate Change Canada and the Province of British Columbia, as per section 39(1) of SARA. In addition, both populations are considered trans-boundary in United States waters. The U.S. National Oceanic and Atmospheric Administration also participated in its preparation.

As stated in the preamble to SARA, success in the recovery of this species depends on the commitment and cooperation of many different constituencies that will be involved in implementing the directions set out in this strategy and will not be achieved by Fisheries and Oceans Canada, the Parks Canada Agency, or any other jurisdiction alone. The cost of conserving species at risk is shared amongst different constituencies. All Canadians are invited to join in supporting and implementing this strategy for the benefit of the Northern and Southern Resident Killer Whale and Canadian society as a whole.

In addition to this recovery strategy, an action plan for the Northern and Southern Resident Killer Whales has been developed that provides information on recovery measures underway and to be taken by Fisheries and Oceans Canada, the Parks Canada Agency and other jurisdictions and organizations involved in the conservation of the species. Implementation of this strategy is subject to appropriations, priorities, and budgetary constraints of the participating jurisdictions and organizations. Multi-species action plans have also been developed by the Parks Canada Agency that include recovery measures for Northern and Southern Resident Killer Whales.

Acknowledgements

Fisheries and Oceans Canada wishes to thank the Resident Killer Whale Recovery Team (Appendix B) for its efforts in developing the 2008 recovery strategy for the Northern and Southern Resident Killer Whales in Canada. The Team members were generous in contributing their own time to the development of the proposed recovery strategy. The recovery strategy is based on an extensive literature review and on technical input from individual team members

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and from group discussions and was mostly written by Kathy Heise. The Recovery Team is grateful for the expert reviews provided by Dr. Volker Deecke of the University of British Columbia and Dr. Christophe Guinet, Centre d'Etudes Biologiques de Chize, France. The cover photo was provided by Graeme Ellis. Doug Sandilands (Vancouver Aquarium Marine Science Centre) provided Figure 1. The amendments in the 2011 recovery strategy were prepared by Fisheries and Oceans Canada. The 2018 amendment to the recovery strategy was prepared by Christie McMillan with input from Dr. John Ford, Dr. Sheila Thornton, Dr. Thomas Doniol-Valcroze, Dr. Lisa Jones, Heather Brekke, Karen Leslie, and Dr. Lance Barrett-Lennard. Robin Abernethy prepared Figures 4 and 5.

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Strategic environmental assessment statement

A strategic environmental assessment (SEA) is conducted on all SARA recovery planning documents, in accordance with the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals. The purpose of a SEA is to incorporate environmental considerations into the development of public policies, plans, and program proposals to support environmentally-sound decision making.

Recovery planning is intended to benefit species at risk and biodiversity in general. However, it is recognized that strategies may also inadvertently lead to environmental effects beyond the intended benefits. The planning process based on national guidelines directly incorporates consideration of all environmental effects, with a particular focus on possible impacts on non-target species or habitats. The results of the SEA are incorporated directly in the strategy itself, but are also summarized below.

While this recovery strategy will clearly benefit the environment by promoting the recovery of the Northern and Southern Resident Killer Whales, several potentially adverse effects also were considered. Through the development of this strategy numerous anthropogenic factors that jeopardize or have potential to jeopardize the recovery of these populations were evaluated and are presented. Principal among the anthropogenic factors or threats are environmental contamination, reductions in the availability or quality of prey, and both physical and acoustic disturbance. In some cases these factors threaten the populations; in other cases they may affect critical habitat. It was concluded that some threats can be mitigated through the use of existing legislation, policies, and programs and, in fact, there are numerous examples of mitigation measures that are currently employed outlined herein. However, in other cases the threat and/or the potential mitigation measure(s) require further research or evaluation before recommendations on specific actions or activities can be formulated. The general type of research, evaluation, and approaches for mitigation are presented in this strategy. However, through the course of action planning, specific activities for recovery and mitigation have been evaluated and detailed in the action plan for these populations along with an evaluation of effects and costs of these activities and measures. Therefore, taking into account the general nature of the recommendations for mitigation to recover these populations and that many of the recommendations to protect critical habitat fall under existing legislation and policies, this strategy will not entail any new significant adverse effects.

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Executive summary

Two distinct populations of Resident Killer Whales (*Orcinus orca*), known as the Northern and Southern Residents, occupy the waters off the west coast of Canada. In 2001, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) designated Southern Resident Killer Whales as Endangered and Northern Resident Killer Whales as Threatened. Both populations are listed in Schedule 1 of the Species at Risk Act (SARA). These two populations are acoustically, genetically, and culturally distinct.

The "Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada" was finalized and published on the Species at Risk Public Registry in 2008. Minor amendments to the recovery strategy were made in 2011 to provide additional clarification regarding critical habitat for Northern and Southern Resident Killer Whales. This recovery strategy is herewith amended once again to include identification of additional critical habitat for these populations and to provide minor updates to background and species information. Additionally, sections of the recovery strategy have been reordered to align with current templates. This recovery strategy is considered one in a series of documents for this species that are linked and should be taken into consideration together; including the COSEWIC status report (COSEWIC 2008) and the Action Plan for the Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada (DFO 2017a). Recovery has been determined to be biologically and technically feasible.

Resident Killer Whale populations in Canadian Pacific waters are presently considered to be at risk because of their small population size, low reproductive rate, and the existence of a variety of anthropogenic threats that have the potential to prevent recovery or to cause further declines. Principal among these anthropogenic threats are environmental contamination, reductions in the availability or quality of prey, and both physical and acoustic disturbance. Even under the most optimistic scenario (human activities do not increase mortality or decrease reproduction), the species' low intrinsic growth rate means that the time frame for recovery will be more than one generation (25 years).

The Southern Resident Killer Whale population has fluctuated between 70 and 99 individuals since 1976, and consisted of 76 members in 2017 (Center for Whale Research unpublished data). During the summer and fall, Southern Residents are primarily found in the trans-boundary waters of Haro Strait, Boundary Pass, the eastern portion of Juan de Fuca Strait, and southern portions of the Strait of Georgia. Some members of the population typically remain in the same general area in winter and spring, but others range over much greater distances, and have been reported as far south as central California, and as far north as southeastern Alaska. During the summer and fall, the principal prey of Southern Residents is Chinook and Chum Salmon (*Oncorhynchus tshawytscha* and *O. keta*); less is known of their diet in the winter and spring.

The Northern Resident Killer Whale population experienced a decline of 7% between 1997 and 2002, but since that time has been increasing at a mean rate of 2.9% per year, reaching approximately 309 individuals in 2017 (Towers et al. 2015; Fisheries and Oceans Canada Cetacean Research Program (DFO-CRP) unpublished data). The population appears to spend the majority of its time from Campbell River and Alberni Inlet northwest to Dixon Entrance, but has been sighted as far south as Grays Harbor, Washington, and as far north as Glacier Bay, Alaska (Ford et al. 2000; 2017). Northern Residents also feed primarily on Chinook and Chum Salmon during the summer and fall. However, like Southern Residents, less is known of their

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winter distribution and diet, and this knowledge gap must be addressed to fully understand the principal threats affecting the population.

The goal of the Resident Killer Whale recovery strategy is to: "ensure the long-term viability of Resident Killer Whale populations by achieving and maintaining demographic conditions that preserve their reproductive potential, genetic variation, and cultural continuity[1]".

In order to achieve this goal, four principal objectives have been identified. They are:

Objective 1: ensure that Resident Killer Whales have an adequate and accessible food supply to allow recovery

Objective 2: ensure that chemical and biological pollutants do not prevent the recovery of Resident Killer Whale populations

Objective 3: ensure that disturbance from human activities does not prevent the recovery of Resident Killer Whales

Objective 4: protect critical habitat for Resident Killer Whales and identify additional areas for critical habitat designation and protection

A description of the broad strategies to be taken to address threats to the species' survival and recovery, as well as research and management approaches needed to meet the recovery goal and objectives are included in section 6. These strategies helped to inform the development of specific recovery measures in the action plan for Northern and Southern Resident Killer Whales. However, significant gaps in knowledge about Killer Whales remain and numerous actions have been identified to address these knowledge gaps and to identify further directions for recovery.

For Northern and Southern Resident Killer Whales, critical habitat is identified to the extent possible using the best available information, and provides the functions, features, and attributes necessary to support the species' life-cycle processes and contribute to achieving the species' recovery goal and objectives. This recovery strategy identifies critical habitat for Resident Killer Whales as four geographical areas: 1) the waters of Johnstone Strait and southeastern Queen Charlotte Strait (Northern Resident Killer Whale critical habitat); 2) transboundary waters in southern British Columbia, including southern Georgia Strait, Haro Strait, and Juan de Fuca Strait (Southern Resident Killer Whale critical habitat); 3) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (Northern and Southern Resident Killer Whale critical habitat); and 4) waters of west Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit (Northern Resident Killer Whale critical habitat) (section 7).

The Action Plan for the Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada was finalized and posted on the Species at Risk Public Registry in 2017. Additionally, multi-species action plans developed by the Parks Canada Agency include recovery measures for Northern and Southern Resident Killer Whales.

[1] Culture refers to a body of information and behavioural traits that are transmitted within and between generations by social learning

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Recovery feasibility summary

Resident Killer Whale populations are not expected to achieve high abundances that might result in a de-listing due to their ecological position as upper trophic-level predators coupled with their apparent propensity to live in relatively small populations. Despite this, and despite gaps in our knowledge, the Recovery Team views the recovery of both populations to a more robust and sustainable status as technically and biologically feasible. Both populations have males, reproductive and pre-reproductive females, and the capacity to grow. During past periods of population growth, annual increases of approximately 3% have been recorded (see 3.3.2 in Population size and trends). Growth is unlikely to exceed these levels due to the low reproductive rate of the species, and therefore the recovery of Northern and Southern Resident Killer Whales can be expected to take more than one generation. Due to its small size, the Southern Resident Killer Whale population will be particularly vulnerable to catastrophic events and continue to have a high risk of extinction during this period.

Technologies and methodologies currently exist to reduce many of the threats facing Killer Whales, their prey and their habitat. As well, identification of critical habitat and the protection of all critical habitat areas from further degradation will ensure that Resident Killer Whales have sufficient habitat for recovery. The action plan for Northern and Southern Resident Killer Whales describes 98 recovery measures to address threats to the species and monitor its recovery, many of which are underway. As Killer Whales travel regularly across international borders, it is timely that both the Washington State and the United States federal governments are also engaged in conservation actions to promote the recovery of both populations.

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1. Introduction

Two distinct populations of Resident Killer Whales (*Orcinus orca*), known as the Northern and Southern Residents, occupy Canadian Pacific waters. Northern Resident Killer Whales are listed as Threatened and Southern Resident Killer Whales are listed as Endangered under the Species at Risk Act (SARA).

The Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada was finalized and published on the Species at Risk Public Registry in 2008. Minor amendments to the recovery strategy were made in 2011 to provide additional clarification regarding critical habitat for Northern and Southern Resident Killer Whales. In 2018, the recovery strategy was amended again to include identification of additional critical habitat for these populations (section 7) and to provide minor updates to background and species information. Further, minor changes were made to the formatting of this recovery strategy to adhere to current national templates where possible. This recovery strategy is considered one in a series of documents for this species that are linked and should be taken into consideration together; including the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) status report (COSEWIC 2008) and an action plan (DFO 2017a).

2. COSEWIC species assessment information

Date of Assessment: November 2008

Common name: Killer Whale - Northern Resident population

Scientific name: Orcinus orca

Status: Threatened

Reason for designation: The population is small, and is limited by the availability of its principal prey, Chinook Salmon. It is also at risk from physical and acoustical disturbance, oil spills and contaminants. However, this population has been increasing slowly since monitoring began in 1975.

Occurrence: Pacific Ocean

Status history: The "North Pacific Resident populations" were given a single designation of Threatened in April 1999. Split into three populations in November 2001. The Northern Resident population was designated Threatened in November 2001. Status re-examined and confirmed in November 2008. Last assessment based on an update status report.

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Date of Assessment: November 2008

Common name: Killer Whale - Southern Resident population

Scientific name: Orcinus orca

Status: Endangered

Reason for designation: The population is small and declining, and the decline is expected to continue. Southern Residents are limited by the availability of their principal prey, Chinook Salmon. There are forecasts of continued low abundance of Chinook Salmon. Southern Residents are also threatened by increasing physical and acoustical disturbance, oil spills and contaminants.

Occurrence: Pacific Ocean

Status history: The "North Pacific Resident populations" were given a single designation of Threatened in April 1999. Split into three populations in November 2001. The Southern Resident population was designated Endangered in November 2001. Status re-examined and confirmed in November 2008. Last assessment based on an update status report.

3. Species information

3.1 Description

The Killer Whale is the largest member of the dolphin family, Delphinidae. Its size, striking black and white colouring and tall dorsal fin are the main identifying characteristics. Killer Whales are mainly black above and white below, with a white oval eye patch, and a grey saddle patch below the dorsal fin. Each Killer Whale has a uniquely shaped dorsal fin and saddle patch, and most animals have naturally acquired nicks and scars. Individual Killer Whales are identified using photographs of the dorsal fin, saddle patch, and sometimes eye patches (Ford et al. 2000). They are sexually dimorphic. Maximum recorded lengths and weights for male Killer Whales are 9.0 m and 5,568 kg respectively, whereas females are smaller at 7.7 m and 4,000 kg (Dahlheim and Heyning 1999). The tall triangular dorsal fin of adult males is often as high as 1.8 m, while in juveniles and adult females it reaches 0.9 m or less. In adult males, the paddle-shaped pectoral fins and tail flukes are longer and broader and the fluke tips curl downward (Bigg et al. 1987).

Currently, most authorities consider Killer Whales to be one species, *Orcinus orca*, having regional variations in diet, size, colouration, and vocal patterns (Heyning and Dahlheim 1988; Ford et al. 2000; Barrett-Lennard and Ellis 2001). Two and possibly three distinct species have recently been proposed for Antarctic populations (Mikhalev et al. 1981; Berzin and Vladimorov 1983; Pitman and Ensor 2003), but they are not currently widely accepted (Reeves et al. 2004). In addition, recent genetic studies report little global variation in mitochondrial DNA suggesting that the population segregation indicated by the morphological differences described above is relatively recent (Barrett-Lennard 2000; Hoelzel et al. 2002).

Three distinct forms, or ecotypes, of Killer Whale inhabit Canadian Pacific waters: Transient, Offshore, and Resident. These forms are sympatric but socially isolated and differ in their

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dietary preferences, genetics, morphology and behaviour (Ford et al. 1998; 2000; Barrett-Lennard and Ellis 2001). Transient Killer Whales feed on marine mammals; particularly Harbour Seals (*Phoca vitulina*), porpoises, and sea lions (Ford et al. 1998). They travel in small, acoustically quiet groups that rely on stealth to find their prey (Ford and Ellis 1999). To the experienced eye, the dorsal fins of Transient Killer Whales tend to be pointed and their saddle patches are large and uniformly grey (Ford et al. 2000). Offshore Killer Whales are not as well understood as Residents and Transients. They feed primarily on elasmobranchs, but have also been documented to prey on teleost fishes, including Chinook Salmon (Heise et al. 2003; Ford et al. 2014). They often travel in large acoustically active groups of 30 or more whales, using frequent echolocation and social calls (Ford et al. 2000). The dorsal fins of Offshore Killer Whales are more rounded than those of Transients, and their saddle patches may either be uniformly grey or may contain a black region.

Resident Killer Whales are the best understood of the three ecotypes. They feed exclusively on fish and cephalopods and usually travel in acoustically active groups of 10 to 25 or more whales (Ford et al. 2000). The tips of their dorsal fins tend to be rounded at the leading edge and have a fairly abrupt angle at the trailing edge. Their saddle patches may be uniformly grey or contain a black region. The social organization of Resident Killer Whales is highly structured. Their fundamental unit is the matriline, comprising all surviving members of a female lineage. A typical matriline comprises an adult female, her offspring, and the offspring of her daughters. Both sexes remain within their natal matriline for life (Bigg et al. 1990). Social systems in which both sexes remain with their mother for life have only been described in one other mammalian species, the Long-Finned Pilot Whale (*Globicephala melas*) (Amos et al. 1993). Bigg et al. (1990) defined pods as groups of closely related matrilines that travel, forage, socialize, and rest with each other at least 50% of the time, and predicted that pods, like matrilines, would be stable over many generations. However, Ford and Ellis (2002) showed that inter-matriline association patterns in the Northern Residents have evolved over the past decade such that some of the pods identified by Bigg et al. (1990) now fail to meet the 50% criterion. Their analysis suggests that pods are best defined as transitional groupings that reflect the relatedness of recently diverged matrilines.

Each Resident pod has a unique dialect made up of approximately a dozen discrete calls (Ford 1989; 1991). These dialects can be distinguished, providing each pod with a unique acoustic signature. Dialects are probably learned from mothers and other associated kin and are highly stable over time (Ford et al. 2000). Their function is not entirely understood, although it appears that they play an important role in mate selection (Barrett-Lennard 2000, discussed below in section 3.4.1. Culture). Despite having distinct dialects, some pods share certain calls and call variants. Pods that share one or more calls belong to a common clan.

Resident Killer Whales that share a common range and that associate at least occasionally are considered to be members of the same community or population. There are two communities of Resident Killer Whales in British Columbia, the Northern Residents and the Southern Residents. Despite having overlapping ranges, these two communities are acoustically, genetically, and culturally distinct. The Northern Resident community consists of three clans, and the Southern Resident community consists of one.

The existence of two distinct populations of Resident Killer Whales using the waters of Washington and British Columbia has been recognized by both the Canadian and U.S. governments. In 2001 COSEWIC assessed Northern Residents as Threatened and Southern Residents as Endangered. In the United States, marine mammals are afforded federal protection under both the Marine Mammal Protection Act (MMPA) and, when listed, under the

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Endangered Species Act (ESA). The Southern Residents were listed as 'depleted' under the MMPA in 2003. In February 2006, Southern Resident Killer Whales were listed as Endangered under the ESA. In June 2004, the Washington State Department of Fish and Wildlife added Southern Resident Killer Whales to their Endangered Species List.

3.2 Distribution

3.2.1. Global range

Killer Whales are found in all oceans, and are most common in areas associated with high ocean productivity in mid to high latitudes (Forney and Wade 2006). They are able to tolerate temperatures ranging from those found in polar waters to the tropics, and have been recorded in water ranging from shallow (several metres) to open ocean depths (Baird 2001).

3.2.2. Canadian Pacific range

Killer Whales are found in all three of Canada's oceans, as well as occasionally in Hudson Bay and in the Gulf of St. Lawrence. They are rarely documented in the northwestern Atlantic, but their occurrence in the eastern Arctic has been increasing in recent years (COSEWIC 2008; Ferguson et al. 2010). In British Columbia (BC), Killer Whales have been recorded throughout almost all salt-water areas, including many long inlets, narrow channels, and deep embayments (Baird 2001). The three ecotypes of BC Killer Whales (Offshore, Transient, and Resident) do not appear to interact socially despite their overlapping ranges (Ford et al. 2000). Offshore Killer Whales are most often sighted on the continental shelf off the outer coast, but they are occasionally found in protected inside waters (Ford et al. 2000). Transient Killer Whales range throughout the area, as do Resident Killer Whales (Ford and Ellis 1999; Ford et al. 2000). Residents and Transients have occasionally been seen in close proximity to each other, but rarely interact (Ford and Ellis 1999). Figure 1 shows many place names mentioned in the text, as well as the general ranges of Northern and Southern Residents.

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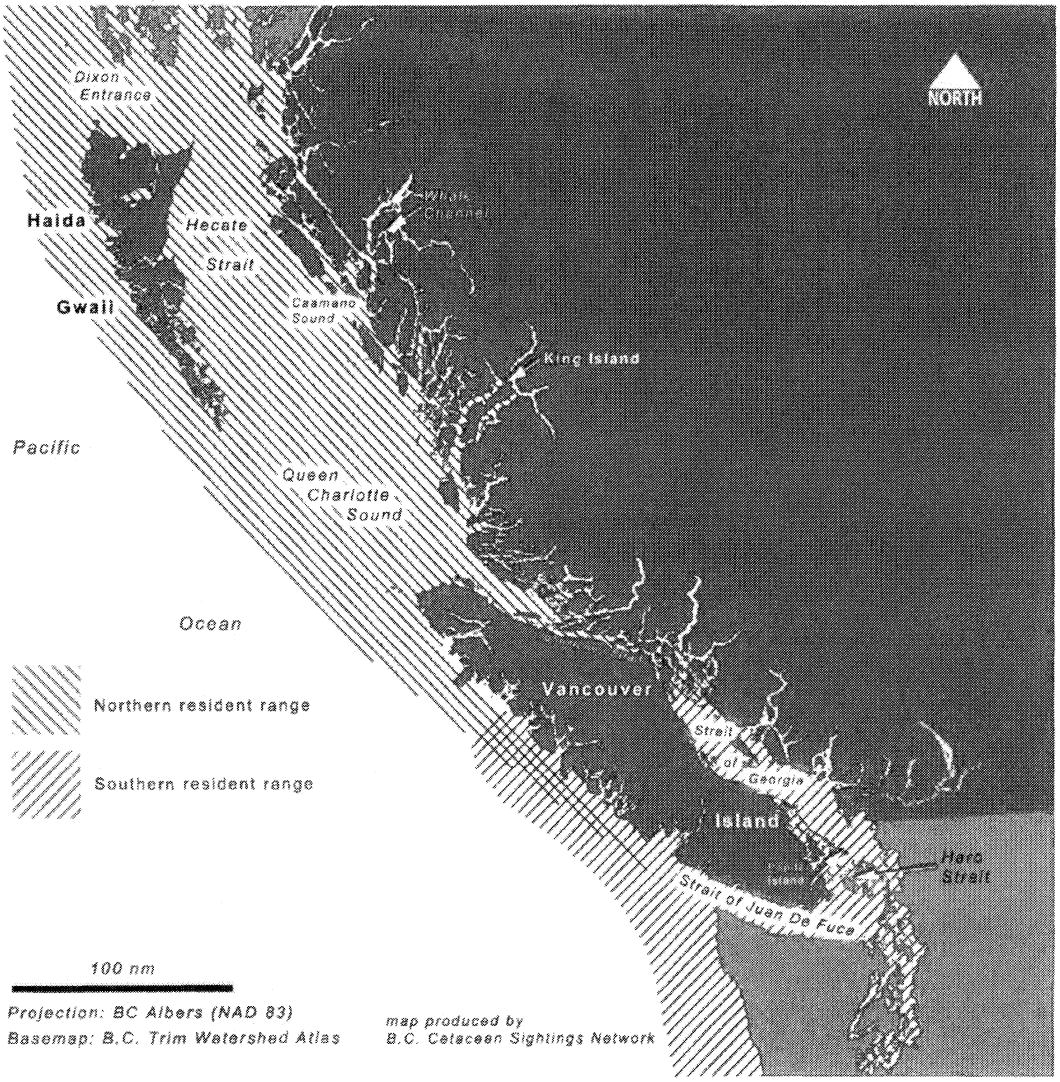

Figure 1. The coast of British Columbia and northwest Washington State showing the general ranges of Northern and Southern Resident Killer Whales.

Southern Residents

The community of Southern Residents comprises a single acoustic clan, J clan, which is composed of three pods (referred to as J, K, and L) containing a total of 20 matrilines (Ford et al. 2000). The known range of this community is from southeastern Alaska to central California (Ford et al. 2017). During summer, its members are usually found in waters off southern Vancouver Island and Northern Washington State, where they congregate to intercept migratory salmon. The main area of concentration for Southern Residents is Haro Strait and vicinity off southeastern Vancouver Island (Figure 1), but they are commonly seen in Juan de Fuca Strait, and the southern Strait of Georgia (Ford et al. 2000). Of the three Southern Resident pods, J pod is most commonly seen in inside waters throughout the year, and appears to seldom leave the Strait of Georgia-Puget Sound-Juan de Fuca Strait region in most years (Ford et al. 2000). K and L pods are more often found in western Juan de Fuca Strait and off the outer coasts of

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Washington State and Vancouver Island. Unlike J pod, K and L pods typically leave inshore waters in winter and return in May or June. Their range during this period is poorly known, but they have been sighted as far south as Monterey Bay, California and as far north as Chatham Strait, southeastern Alaska (Ford et al. 2017).

Northern Residents

The Northern Resident Killer Whale community comprises three acoustic clans (A, G, and R) containing 34 matrilines, which range from Glacier Bay, Alaska to Grays Harbor, Washington (Ford et al. 2000; Ford et al. 2017). From June to October, some Northern Resident Killer Whales are frequently documented in Johnstone Strait and Queen Charlotte Strait (Figure 1), off northeastern Vancouver Island (Ford et al. 2000). Their range at other times of the year is not as well understood. Small groups of Northern Residents are sometimes seen in Johnstone Strait and other inshore waters along the BC coast in winter (Ford et al. 2000) but such sightings are rare even when seasonal changes in observer effort are taken into account.

There is no evidence that clans are restricted to specific regions within the range of their community, but some show an apparent preference for particular areas (Ford et al. 2000). For example, the most commonly sighted whales off northeastern Vancouver Island belong to A clan, whereas most of the whales sighted off the west coast of Vancouver Island belong to G clan, and R clan seems to prefer the northern part of the community's range. The range of Northern Residents overlaps with Southern Residents and with a community referred to as the southern Alaskan Residents. Northern Residents have never been seen associating with members of the Southern Resident community, and while they were observed travelling in proximity to a southern Alaskan Resident pod on one occasion (Dahlheim et al. 1997), it is not clear that social mixing took place. Genetic studies have not ruled out the possibility of occasional breeding between the Northern Resident and southern Alaskan Resident communities (Barrett-Lennard and Ellis 2001).

3.3 Population size and trends

3.3.1 Global

Little is known of the historic abundance of Killer Whales, except that they were "not numerous" (Scammon 1874). Since the early 1970s, photo-identification studies have provided reasonable population estimates for Killer Whales in the near-shore waters of the northeastern Pacific (Washington, BC, Alaska, and California), and similar work is now underway in several other coastal regions (e.g. the Gulf of California, the Russian Far East, New Zealand, Patagonia, Iceland, and Norway). In other areas line transect surveys have been used to provide population estimates. These include the Antarctic (25,000 whales, Branch and Butterworth 2001) and the Eastern Tropical Pacific (8,500 whales, Wade and Gerrodette 1993). As such, the worldwide abundance of Killer Whales is probably between 40,000 and 60,000 whales (Forney and Wade 2006). Trend data for Killer Whales are generally not available, with the exception of Killer Whales in BC (discussed below) and southern Alaskan Residents (population thought to be generally increasing, Matkin et al. 2008) and for a small population of Transients in Prince William Sound (AT1s, currently in decline, not likely to recover, Saulitis et al. 2002).

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3.3.2 British Columbia

There are no population estimates for Killer Whales in BC prior to 1960. Population censuses for Killer Whales are now conducted annually using photo-identification of individuals. Population trends vary by community and clan. For the purposes of the recovery strategy, data held by the Center for Whale Research (CWR), Friday Harbor, Washington, were used to describe the population status and trends of Southern Resident Killer Whales. Data held by the Fisheries and Oceans Canada Cetacean Research Program (DFO-CRP) were used to describe the Northern Resident Killer Whale population. Whales are censused slightly differently by each research group.[2]

The Southern Resident count includes all whales that are seen during a calendar year, and mortalities are included in the count depending on when they take place. For example, a whale that is not seen from March onwards is assumed to be dead. There is less certainty that a whale that is not seen in November or December is dead, and it may be included in the count. In recent years, observer effort has been high and most members of the Southern Resident community are photographed annually, so the count is reasonably precise.

The Northern Resident count also includes all whales that are documented during a calendar year. However, not all members of the Northern Resident community are seen each year, so the count data are generally less precise than for the Southern Residents.

In 2017, there were a total of approximately 385 Northern and Southern Resident Killer Whales (CWR unpublished data; DFO-CRP unpublished data). By comparison there were approximately 521 Transient (Ford et al. 2013) and 300 Offshore Killer Whales (Ford et al. 2014), although these numbers are less precise than the Resident counts, because not all individuals are encountered each year (Ford et al. 2000).

Southern Residents

The size of the Southern Resident community has been known since the first complete photo-identification census in 1976 (CWR unpublished data). Figure 2 shows the size of each pod as well as the fluctuation in the total population of the Southern Resident community from 1976-2017.

[2] Note that there are small discrepancies in the Southern Resident counts in the literature due to different methods of recording when whales are considered to enter or leave the population.

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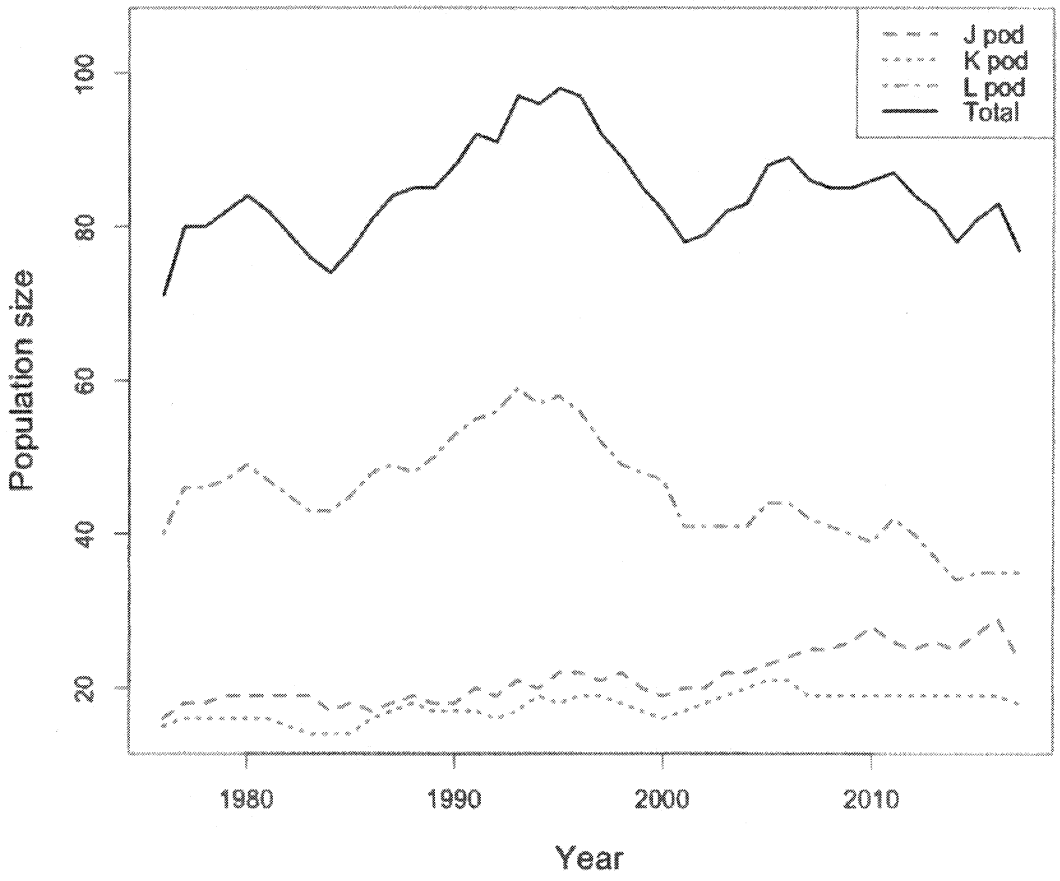

Figure 2. Population size and trends for Southern Resident Killer Whales from 1976-2017. Data source: Center for Whale Research (unpublished).

Although the Southern Resident community was likely increasing in size in the early 1960s, the number of whales in the community dropped dramatically in the late 1960s and early 1970s due to live capture for aquariums (Bigg and Wolman 1975). A total of 47 individuals that are known or likely to have been Southern Residents were captured and removed from the population (Bigg et al. 1990). The population increased 19% (3.1% per year) from a low of 70 individuals after the live-captures ended in 1973, to 83 whales in 1980, although the growth rate varied by pod (Figure 2). From 1981-1984 the population declined 11% (-2.7% per year) to 74 whales as a result of lower birth rates, higher mortality for adult females and juveniles (Taylor and Plater 2001), and lower numbers of mature animals, especially males, which was caused by selective cropping in previous years (Olesiuk et al. 1990). From 1985 to 1995, the number of Southern Residents increased by 34% (2.9% per year) to 99 animals. A surge in the number of mature individuals, an increase in births, and a decrease in deaths contributed to the population growth. Another decline began in 1996, with an extended period of poor survival (Taylor and Plater 2001; Krahn et al. 2002) and low fecundity (Krahn et al. 2004) resulting in a decline of 17% (-2.9% per year) to 81 whales in 2001. Since 2001, the population has fluctuated between 76 and 89 individuals, and consisted of 76 members in 2017 (CWR unpublished data).

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Population viability analyses (PVA) have been used to estimate the extinction risk of Southern Resident Killer Whales (Taylor and Plater 2001; Krahn et al. 2002; 2004). As would be expected, extinction risk increases when the frequency and magnitude of catastrophes such as oil spills and disease epidemics are elevated. These models predict that if the mortality and reproductive rates of the 1990s persist, there is a 6-100% probability that the population will be extinct within 100 years, and a 68-100% risk that the population will be extinct within 300 years. Extinction of the Southern Resident population can be regarded as inevitable in these scenarios under the assumptions of the analyses, and catastrophic events simply hasten its demise. When the mortality and reproductive rates of the entire 1974-2000 period are used, the risk of the population going extinct declines to 0-55% over 100 years and 2-100% over 300 years. A more recent PVA predicted survival and recovery rates of Southern Resident Killer Whales based on sex-structured models and high-quality demographic data that encompassed one Killer Whale generation (25 years; 1987-2011). These models predicted an annual decline of 0.91% for this population, with an extinction risk of 49% over a 100-year period (Velez-Espino et al. 2014). A PVA that explored the relative importance of the primary anthropogenic threats (Chinook prey availability, noise and disturbance, and contaminants) to Southern Resident Killer Whale population trajectories was constructed by Lacy et al. (2017). These models predicted that prey limitation had the greatest potential to impact population growth, but that either higher levels of noise and disturbance or higher levels of PCB contamination would also be sufficient to shift population trajectories from slow positive growth into decline.

Northern Residents

The Northern Resident community was likely increasing in size during the early 1960s, but was cropped by the live capture fishery of 1964-1973, during which at least 14 individuals were removed. Twelve of those are known to have been from one pod (A5, Bigg et al. 1990). When first censused in 1974, the Northern Resident community was estimated to contain approximately 120 whales. Although abundance estimates for Northern Residents are less precise than those for Southern Residents because not all matrilines are seen each year, it appears that the Northern Resident community grew steadily during the period 1974 to 1991 (approximately 3.4% per year, Figure 3). The population increased to 220 animals in 1997 (growth of 3.0% per year, Towers et al. 2015). Several reasons have been postulated for the Northern Residents' success relative to Southern Residents during this period: the population's larger size may have buffered changes in birth and death rates, fewer animals were captured during the live-capture fishery (Olesiuk et al. 1990), and in general they are exposed to less disturbance and environmental contamination. Between 1997 and 2003, the Northern Resident community declined 7% to 205 whales in 2003 (Towers et al. 2015, Figure 3). The increased mortality rates that drove the declines during this period for both Northern and Southern Residents coincided with a period of reduced range-wide Chinook Salmon abundance (Ford et al. 2010). The Northern Resident Killer Whale population has been increasing at an annual average rate of 2.9% since that time, reaching approximately 309 individuals in 2017 (Towers et al. 2015; DFO-CRP unpublished data). Population viability analyses based on sex-structured models and high-quality demographic data predicted a 1.58% annual increase and an extinction risk of 0% for Northern Resident Killer Whales over a 100-year period (Velez-Espino et al. 2014).

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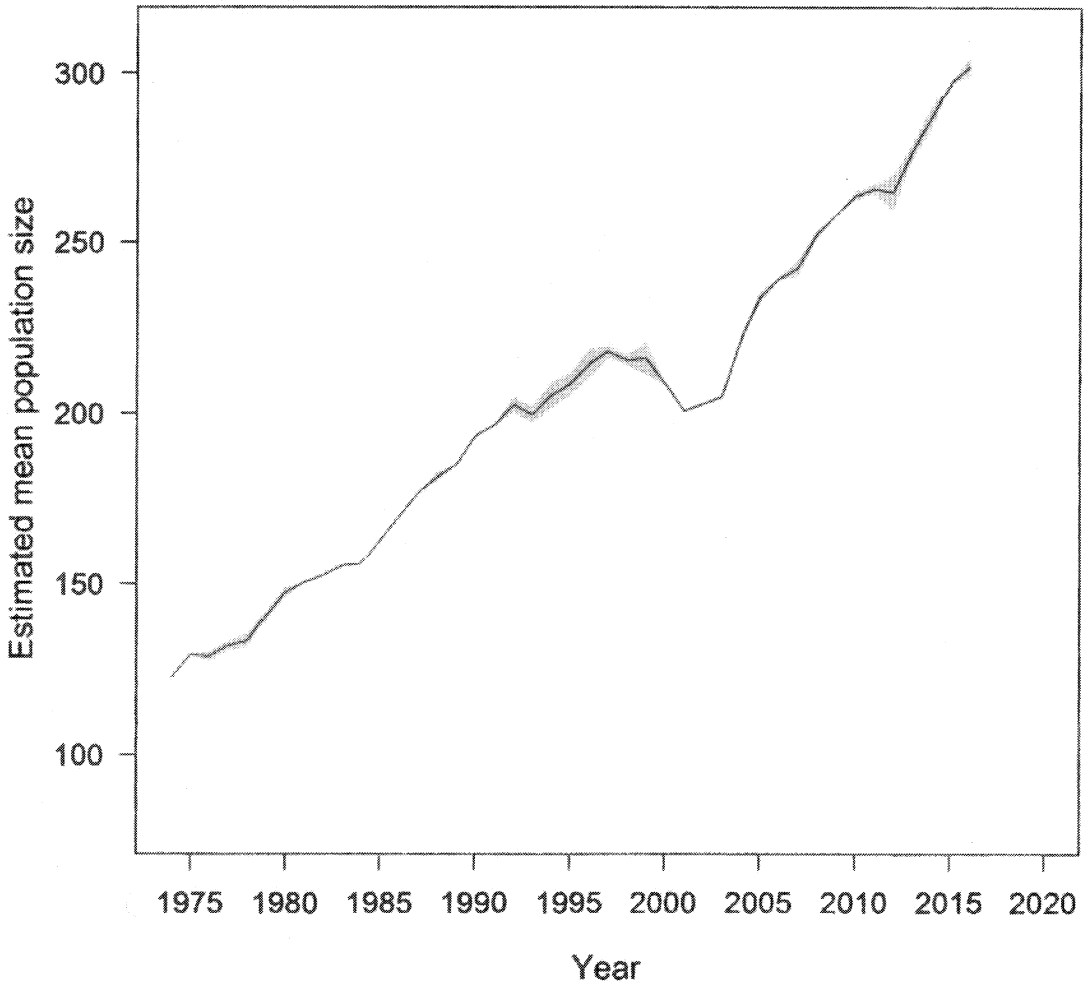

Figure 3. Population size and trends for Northern Resident Killer Whales from 1974 to 2016. In years with uncertainty, the minimum and maximum population sizes are represented with grey shading. Data sources: Towers et al. (2015); DFO-CRP (unpublished).

3.4 Natural factors affecting population viability and recovery

It is important to note that Northern and Southern Resident Killer Whales have been studied primarily in protected waters during the months of May to October (Ford et al. 1998; 2000). Their behaviour and ecology in other areas and seasons is less well-known.

3.4.1. Biological limiting factors

The following description of the biology of Killer Whales is based on data from both the Northern and Southern Resident populations. Essentially, Resident Killer Whales feed on fish and do not switch to marine mammals when their principal prey species are not abundant. They are long-lived animals with no natural predators. On average, females produce a single calf every five to

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six years during a 25-year reproductive period, and as a result the population has an inherently slow rate of growth. Resident Killer Whales have strong cultural traditions that influence their association and mating behaviours, which also limits the capacity for the population to grow. More detailed information on the factors that may limit the ability of Resident Killer Whale populations to grow is provided below.

Diet

Although Killer Whales feed on a wide range of prey species globally, Northern and Southern Resident Killer Whales are dietary specialists, feeding primarily on fish (Ford et al. 1998). Unlike Transient Killer Whales, Resident Killer Whales do not feed on marine mammals and the breadth of their diet appears to be quite limited. Extensive surface observations and collection of prey fragments from sites of kills by Resident Killer Whales have shown that these whales forage selectively for certain salmonids regardless of their abundance (Ford and Ellis 2005; Ford et al. 2010; Hanson et al. 2010). Chinook Salmon is the predominant prey species taken by both Northern and Southern Resident communities during May-August, but Chum Salmon is more prevalent in September-October. Coho Salmon (*Oncorhynchus kisutch*) are taken in low numbers in June-October, but Sockeye (*O. nerka*) and Pink (*O. gorbuscha*) Salmon are not significant prey species despite their high seasonal abundance. Non-salmonid fishes do not appear to represent an important component of Resident Killer Whale diet during May-October. Stomach content analysis from stranded Killer Whales and fecal sampling from live whales also support the importance of Chinook and Chum Salmon in Resident Killer Whale diet (Ford et al. 1998; Hanson et al. 2010).

Resident Killer Whales likely forage selectively for Chinook Salmon over other available salmonids because of the large size, high fat content, and year-round availability of this species in coastal waters (Ford et al. 1998; Ford and Ellis 2005). Killer Whales feeding at Langara Island in Haida Gwaii (Queen Charlotte Islands) are known to feed on Chinook from stocks returning to rivers as far north as northern BC and as far south as California (Ford et al. 2017).
The movement patterns of Resident Killer Whales are influenced by the availability of their preferred prey. During the summer months, Resident Killer Whale distribution is associated spatially and temporally with the migratory routes of Chinook Salmon as this important prey species returns to natal streams to spawn (Ford and Ellis 2005). In fall, the presence of Chum Salmon appears to influence the movements of Resident Killer Whales. In Johnstone Strait, Chum Salmon is the primary prey species taken by Northern Residents from late September through October (Ford and Ellis 2005). Fall movements of Southern Resident pods into Puget Sound were roughly correlated with runs of Chum Salmon, as well as Chinook (Osborne 1999). Recent winter sightings of Southern Resident Killer Whales in central California were coincident with high local densities of Chinook Salmon (N. Black, Monterey Bay Whale Watch, unpublished data).

Social organization

The social structure of Killer Whales in BC appears to be complex and differs among the three ecotypes (Ford and Ellis 1999; Ford et al. 2000). The social structure of Resident Killer Whales is the best understood, and one of its unique features is that there is no permanent dispersal of either sex from the natal group. The basic social unit of Resident Killer Whales is the matriline, composed of an older female (or matriarch), her male and female offspring, and the offspring of her daughters (Ford et al. 2000). Because matriarchs have long life spans, some matrilines may contain four or more generations. In over three decades of study, immigration and emigration have rarely been observed (Bigg et al. 1990; Ford et al. 2000). Two recent cases of juvenile

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Resident Killer Whales leaving their matrilines and traveling alone are considered to be exceptional, isolated incidents. One, a female calf referred to as A73, or Springer, was separated from her pod shortly after her mother died and was observed alone after a brief period of association with a pod from another clan. She was subsequently reunited with her pod and joined another matriline. The second incident involved a male calf L98, or Luna, who became isolated from his pod and all other Killer Whales for unknown reasons in 2001.

Although individuals do not disperse from their natal group, matriline splitting does occasionally occur. For example, sisters often begin to spend more and more time apart after their mother dies, and their own matrilines may eventually become socially independent (Bigg et al. 1990; Ford et al. 2000; Ford and Ellis 2002). Stredulinsky (2016) conducted an analysis of matriline fission and found that group splitting is driven primarily by population growth and by the demographic composition of groups.

Reproductive parameters

Females reach sexual maturity, defined as the age of first successful pregnancy, at 15 years on average (range 12-18 years) (Olesiuk et al. 1990). Males reach sexual maturity, defined as when the dorsal fin shape changes sufficiently to distinguish males from females, at 15 years on average (range 10-17 years). Males reach physical maturity (when the dorsal fin reaches its full height) at about 20 years. Genetic paternity testing indicates that males rarely reproduce before 25 years of age (Barrett-Lennard 2000). The gestation period of Killer Whales is typically 16 to 17 months, one of the longest of all whales (Walker et al. 1988; Duffield et al. 1995). Only single calves are normally born. Only one possible case of twins has been reported (Olesiuk et al. 1990).

Approximately equal numbers of males and females are born (Dahlheim and Heyning 1999) and newborn calves are between 218 and 257 cm long (Olesiuk et al. 1990). Haenel (1986) estimated that calves are weaned at one to two years of age. The interval between calving is usually about five years for Northern Residents and six years for Southern Residents (DFO-CRP unpublished data). However the interval is highly variable, ranges from two to 12 years, and increases with age until menopause (Olesiuk et al. 1990). Overall, females have an average of five viable calves in a 25 year reproductive lifespan (Olesiuk et al. 1990). Calving occurs year-round, but appears to peak between fall and spring.

Mating behaviour

Mating behaviour between male and female Killer Whales has rarely been observed in the wild. However, genetic evidence has revealed that Resident Killer Whales have a propensity to mate outside their matriline (and clan, in the case of Northern Residents) but inside their community (Barrett-Lennard 2000; Barrett-Lennard and Ellis 2001). This minimizes the possibility of inbreeding very effectively, but restricts the options for mating if the population becomes very small. For example, in the Southern Resident community there may be an extreme shortage of sexually mature males, particularly for L pod females, assuming females select mates outside their pod.

Survival and longevity

Survival of Resident Killer Whales varies with age. Neonate mortality (from birth to six months of age) is high, reported at approximately 43% for all Residents (Olesiuk et al. 1990), and 42% for Northern Residents (Bain 1990). Accordingly, average life expectancy is reported for an animal

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that survives the first six months, and is estimated to be 50 years for females and 29 years for males (Olesiuk et al. 1990). Maximum longevity for females is an estimated 80-90 years and for males is 50-60 years (Olesiuk et al. 1990). Although a typical trait in most mammals, the shorter lifespan of males could be related to sexual selection (Baird 2000) or to higher levels of persistent chemicals, such as PCBs (Ross et al. 2000). The bioaccumulation of toxins is discussed in greater detail in section 4.2.1. Atypical, however, is the prolonged post reproductive period of females, discussed in the following section. Recent evidence suggests that declines in both the Northern and Southern Resident populations (all age and sex classes) can be attributed to an increase in mortality rates (Ford et al. 2005) as well as a decrease in fecundity for Southern Residents (Krahn et al. 2004). The potential causes of the population declines are discussed in section 4.

Reproductive senescence

The average life span of female Resident Killer Whales is approximately 50 years, but on average they produce their last calf at 39, and a significant number live to 70 years or more (Olesiuk et al. 1990). The 'grandmother hypothesis' suggests that the presence of older females in a group can increase the survival of offspring, and this may indeed be true for Killer Whales (see discussion under Culture below). In any case, when evaluating the status of Killer Whale populations, it is important to consider the age structure of the population and to note that post-reproductive adult females are no longer able to contribute directly to population growth. In an endangered population of Transient Killer Whales in southern Alaska (AT1s), no calves have been born since 1984. Since the remaining females are near or beyond their reproductive years, the population is on the verge of extinction (Saulitis et al. 2002), with virtually no prospect for recovery, even though it may persist for many more years.

Culture

Culture refers to a body of information and behavioural traits that are transmitted within and between generations by social learning. Until recently, culture was generally considered a distinguishing feature of human societies. Of late, the concept of culture has been broadened to include non-human mammals and birds (reviewed in Rendell and Whitehead 2001) and there is strong evidence for it in both Northern and Southern Resident Killer Whales, and southern Alaskan Resident Killer Whales (Ford 1991; Ford et al. 1998; Barrett-Lennard et al. 2001; Yurk et al. 2002). There is also evidence for culture in other cetaceans, such as Sperm Whales (Whitehead and Rendell 2004), although not to the same extent as for Resident Killer Whales (Rendell and Whitehead 2001).

Dialects are the best studied form of culture in Killer Whales. A calf learns its dialect from its mother and other closely related adults, retains it for life, and passes it on to the next generation with few modifications (Ford 1991; Deecke et al. 2000; Miller and Bain 2000). These culturally-transmitted dialects may play an important role in inbreeding avoidance, since females apparently prefer males from dialect groups other than their own (Barrett-Lennard 2000; Yurk et al. 2002).

Culture also appears to play an important role in feeding, with dietary preferences and probably foraging techniques and areas passed on culturally (Ford et al. 1998). Culture may also select for longevity in Killer Whales, as it provides a mechanism for older individuals to increase the fitness of their offspring and relatives by transferring knowledge to them (Barrett-Lennard et al. 2001). Foster et al. (2012) found that both reproductive and post-reproductive female Resident Killer Whales increase their own offspring's survival. This is particularly evident for older male

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offspring: the death of post-reproductive female Resident Killer Whales increases mortality risk by almost 14-fold in their >30 year old sons. Prey sharing among Resident Killer Whales is likely one way that older individuals increase the fitness of their offspring. Cooperative prey sharing has been documented by all age and sex classes of Resident Killer Whales, but adult females share most frequently (Wright et al. 2016). Adult female Northern Resident Killer Whales share over 90% of the fish that they catch, most often with their offspring (Ford and Ellis 2006; Wright et al. 2016), and thus play a significant role in provisioning these members of their matrilines.

Culture may help animals adapt to changing environments by allowing them to learn from each other in addition to learning from experience. For example, based on differences in foraging success by sympatric clans of Sperm Whales under different climatic regimes, Whitehead et al. (2004) suggest that cultural diversity may be even more significant than genetic diversity in helping Sperm Whales to deal with a changing ocean climate. While we do not know if this is true for Resident Killer Whales, we do know that they respond culturally to anthropogenic changes in their environment. In Alaska, Resident Killer Whales responded to longline fishing in areas of Alaska by learning to raid the gear and take fish, and this behaviour spread rapidly throughout the population (Matkin and Saulitis 1994). Depredation of Pacific Halibut longline fisheries and salmon troll fisheries is also known to occur in BC waters (Ford 2014).

Depensation

Resident Killer Whale populations are at risk simply by virtue of their small population size. In general, small populations have an increased likelihood of inbreeding and lower reproductive rates, which can lead to low genetic variability, reduced resilience against disease and pollution, reduced population fitness, and elevated extinction risks due to catastrophic events. Pacific Resident Killer Whale populations are considered small, at 76 Southern Residents and approximately 309 Northern Residents in 2017 (CWR unpublished data; DFO-CRP unpublished data). If either Resident population is reduced further, they may be faced with a shortage of suitable mates. Among the Southern Residents, L pod females may be particularly vulnerable to this scenario because of the small number of reproductive males in J and K pod. Even under ideal conditions, the population will recover slowly because Killer Whales calve relatively infrequently.

Northern Resident Killer Whales have been shown to minimize inbreeding and its inherent risks by consistently selecting unrelated mates (Barrett-Lennard and Ellis 2001), suggesting that this population is more genetically viable than would be expected from population size alone. In contrast, recent evidence of incestuous mating among Southern Resident Killer Whales presented by Ford et al. (2018) suggests that they may be substantially more vulnerable to negative effects of inbreeding, particularly if the population remains at or below its present size for multiple generations.

Natural mortality

Killer Whales have no recorded predators, other than humans. There are several potential sources of natural mortality that may impact Killer Whales: entrapment in coastal lagoons or constricted bays, accidental beaching, disease, parasitism, biotoxins, and starvation (Baird 2001). However, it cannot be ruled out that anthropogenic factors may make Killer Whales more vulnerable to natural sources of mortality. For example, disturbance from intense noise may cause animals to strand (Perrin and Geraci 2002). In this case, the proximate cause of death, stranding, is a natural source of mortality, but the death would be ultimately human-caused.

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3.4.2. Other natural limiting factors

Entrapment and/or accidental beaching

Accidental beaching and entrapment are sometimes a source of mortality for Killer Whales. At least four mass strandings involving more than 36 individuals occurred in BC in the 1940s (Cameron 1941; Carl 1946; Pike and MacAskie 1969; Mitchell and Reeves 1988). Although the causes of mass strandings in toothed whales are uncertain, disease, parasitism, and disturbance from intense underwater noise have been suggested as possible causes (Perrin and Geraci 2002). Two possible cases of temporary entrapment have been reported for Southern Resident Killer Whales (Shore 1995; 1998). In 1991, J pod spent 11 days in Sechelt Inlet, apparently reluctant to exit through a constricted entrance with tidal rapids. In 1997, 19 Killer Whales spent 30 days in Dyes Inlet, Puget Sound, possibly because they were reluctant to pass under a noisy bridge (Shore 1998).

Disease and parasitism

Diseases in captive Killer Whales have been well studied, but little is known of diseases in wild Killer Whales (Gaydos et al. 2004). Causes of mortality for captive Killer Whales include pneumonia, systemic mycosis, other bacterial infections, and mediastinal abscesses (Greenwood and Taylor 1985). Of 16 pathogens identified in Killer Whales, three have been detected in wild individuals: marine *Brucella*, *Edwardsiella tarda*, and cetacean poxvirus (Gaydos et al. 2004). A severe infection of *E. tarda* resulted in the death of a Southern Resident male in 2000 (Ford et al. 2000). Marine *Brucella* may cause abortions and reduced fecundity in Killer Whales (Gaydos et al. 2004). Cetacean poxvirus can cause mortality in calves and causes skin lesions (Van Bressem et al. 1999). Twenty-seven additional pathogens have been identified in sympatric odontocetes that may be transmittable to Killer Whales (Gaydos et al. 2004).

External parasites of Killer Whales have been reported in Mexico (Black et al. 1997), but none have been observed on Resident Killer Whales in BC (Baird 2001). Internal parasites of Killer Whales include various trematodes, cestodes, and nematodes (Heyning and Dahlheim 1988; Raverty et al. 2014). These endoparasites are usually acquired through infected food, but the amount of infection and their contribution to Killer Whale mortality are not known at this time.

Algal blooms

Harmful algal blooms (HABs) are blooms of algae that produce biotoxins such as paralytic shellfish poison, domoic acid, saxitoxin, and brevitoxin. Such toxins can accumulate in the tissues of species that ingest them and are magnified up the food chain. Mortality of Humpback Whales (*Megaptera novaeangliae*) off Massachusetts in 1987 and California Sea Lions (*Zalophus californianus*) in California in 1998 have been linked to biotoxin exposure (Geraci et al. 1989; Scholin et al. 2000). Several species of marine mammals have been shown to have a potential susceptibility to the neurotoxic effects of biotoxins (Trainer and Baden 1999). Given the apparent increase in HAB event frequency, and the potential for toxic effects in Killer Whales, there may be some risk to Resident Killer Whales exposed to biotoxins through HABs, although the risk is thought to be low (Krahn et al. 2002).

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Regime shifts

In the North Pacific, there are widespread changes that occur in the circulation and physical properties of the ocean. These changes take place on decadal time scales and are referred to as 'regime shifts' (see reviews in Francis et al. 1998; Benson and Trites 2002). Such shifts may happen quite quickly, and result in dramatic changes in the distribution and/ or abundance of many species, ranging from zooplankton to fish and possibly marine mammals and seabirds. If the distribution or abundance of Resident Killer Whale prey changed significantly following a regime shift, it is possible that Killer Whales could be affected.

4. Threats

4.1. Historic threats

Pliny the Roman scholar first described a Killer Whale as an "enormous mass of flesh armed with savage teeth" during the first century AD. Since then written records have often depicted Killer Whales as savage, destructive, ferocious, and a danger to humans. However, they were rarely hunted, with the exception of Japanese, Norwegian and Russian whalers. Contemporary fishermen have viewed the Killer Whale as a competitor for their fish and a threat to their livelihood (Olesiuk et al. 1990; Ford et al. 2000). The live capture of Killer Whales for aquariums in the 1960s and early 1970s reduced local populations, some drastically.

Harvest and live captures

Killer Whales were hunted commercially, but whaling operations generally targeted other species of whales. In Canada, there are only a few harvest records of Killer Whales, most of which took place on the east coast and in the Arctic (e.g. Mitchell and Reeves 1988; Reeves and Mitchell 1988). However, large numbers of whales were taken in other areas of the world. The Japanese killed 60 Killer Whales per year between 1948 and 1957 (Nishiwaki and Handa 1958). Norwegian whalers culled 2,345 Killer Whales between 1938 and 1981 (Øien 1988). The former USSR captured approximately 25 Killer Whales per year in the Antarctic and harvested 906 whales in one season (Berzin and Vladimirov 1983). In 1982, the International Whaling Commission recommended a halt to the harvest of Killer Whales until the impact on populations was better understood. No Killer Whales have been reported taken since then, though small numbers may continue to be caught but remain unreported. For example, genetic testing has revealed the presence of Killer Whale in meat sold in Japanese and Korean markets (Baker et al. 2000).

In the late 1960s and early 1970s, Killer Whales were sought extensively for display in public aquaria. While they were captured from various areas throughout the world, the majority came from the waters of the northeastern Pacific Ocean. Between 1962 and 1974, 68 Killer Whales were taken from this area, 47 of which are known or assumed to be Southern Residents (Olesiuk et al. 1990). This cropping clearly had a major impact on the Southern Resident community, which numbered only 70 animals in 1974, and has likely affected productivity of the community for many years after the live captures ended in 1975.

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Intentional shootings

Historically, negative attitudes towards Killer Whales in BC led to efforts by both government and individuals to cull local populations through shooting. In 1960, the federal Fisheries Department mounted a land-based machine gun near sports fishing lodges near Campbell River to reduce the number of Killer Whales (Ford et al. 2000). Fortunately it was never fired. In the 1960s and 1970s, approximately one quarter of whales live captured for aquaria had gunshot wounds (Ford et al. 2000). Societal attitudes towards Killer Whales have changed since 1974, and fresh bullet wounds are now rarely, if ever, seen on whales in BC and Washington (Ford et al. 2000), although even occasional shootings could limit population growth.

Acoustic harassment devices

Aquaculture farms in Washington and BC have used acoustic harassment devices (AHDs) that emit loud signals underwater to reduce depredation by Harbour Seals and sea lions. Some signals may be heard from up to 50 km away (Morton and Symonds 2002). Their use at a farm near Northern Vancouver Island was associated with significant declines in the use of nearby waters by both Resident and Transient Killer Whales (Morton and Symonds 2002). Harbour Porpoise abundance was also found to drop dramatically when AHDs were in active use (Olesiuk et al. 2002). The use of AHDs is no longer permitted in BC or in Washington. They are still used at Ballard Locks in Seattle to deter sea lions, but the configuration of the canal limits the amount of noise escaping to the open ocean (Bain 1996).

4.2. Current threats

A variety of threats may directly impact Northern and Southern Resident Killer Whale populations in BC, particularly because of their small population sizes. Threats include environmental contaminants (including oil spills), reduced prey availability, disturbance and noise pollution, each of which is discussed in more detail below. An additional emerging threat, vessel strikes, was identified during a science-based review of recovery actions for Southern Resident Killer Whales (DFO 2017c). Other threats such as mortality in fishing gear have posed a threat to cetacean populations in other areas, and could potentially impact Resident Killer Whales. Climate change is affecting entire ecosystems, and it is likely that in order to survive, Killer Whales will have to adapt to the consequences of local changes in their prey base. How current threats may act synergistically to impact Killer Whales is unknown, but in other species multiple stressors have been shown to have strong negative and often lethal effects, particularly when animals carry elevated levels of environmental contaminants (Sih et al. 2004).

The extent to which Northern and Southern Resident Killer Whales are affected by anthropogenic threats varies, depending on the threat. For example, Northern Resident Killer Whales may be more vulnerable to seismic surveys on the north coast, particularly if the moratorium on oil and gas exploration is lifted, whereas Southern Residents, by virtue of the waters they spend significant time in, may be more vulnerable to environmental contaminants.

4.2.1. Environmental contaminants

There are numerous chemical and biological pollutants that may directly or indirectly impact Resident Killer Whales, ranging from persistent organic pollutants (POPs) to antibiotic resistant bacteria and exotic species. Below we describe the major types of contaminants, their sources and their potential effects on Killer Whales (where known). For a list of the acronyms mentioned

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below, see Appendix C. There have been only a handful of studies that have measured contaminant levels in Killer Whales, and for obvious reasons no controlled experiments have been done to assess how these contaminants may affect them directly. However, the effects of contaminants on other species such as pinnipeds are better understood, and in many cases can be generalized to Killer Whales, particularly because the physiological processes of mammals are similar across different species. This 'weight of evidence' approach is outlined elsewhere for marine mammals (Ross 2000).

Although it is important to assess the direct effects of contaminants, Fleeger et al. (2003) make an important case for considering their 'indirect' effects on community structure, as well as on individual organisms and their behaviour. In a review of 150 studies, contamination resulted in changes in species abundance and community structure. Sixty percent of the communities that were experimentally manipulated showed a reduction in upper trophic level predators, which masked, enhanced or confused the interpretation of any direct effects of contaminants on individual organisms or species.

Persistent organic pollutants (POPs)

There are likely thousands of chemicals to be found in the Killer Whales of BC, but a few key classes are of particular concern today. Studies of environmental contaminants in Resident and Transient Killer Whales in BC and Washington have revealed that they are among the most contaminated mammals in the world (Ross et al. 2000; 2002; Krahn et al. 2009). Killer Whales are vulnerable to accumulating high concentrations of POPs because they are long-lived animals that feed high in the food web (Ross et al. 2000; 2002; Rayne et al. 2004; Ross 2006). POPs are persistent, they bioaccumulate in fatty tissues, and are toxic, features that have led to increased regulatory scrutiny of these chemicals by authorities around the world. POPs include 'legacy' contaminants such as the polychlorinated biphenyls (PCBs) and the organochlorine pesticide DDT which are no longer widely used in industrialized countries, but remain persistent in the environment. The so-called 'dirty dozen' POPs are encompassed under the terms of the Stockholm Convention which aims to phase out use of chemicals of global ecotoxicological concern. They also include the polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs or furans), by-products of incomplete combustion, of pesticide manufacture, and of the (now regulated) use of elemental chlorine and pentachlorophenol (PCP) in pulp and paper bleaching and wood treatment processes, respectively. In recent years, regulations have resulted in a reduction in the release of such contaminants into the marine environment (Hagen et al. 1997).

Contaminants of 'current concern' in the industrial world include the new generation of polybrominated trienylethers (PBTs), flame retardants such as polybrominated diphenylethers (PBDEs), as well as currently used pesticides. Table 1 lists the POPs that are a concern for Resident Killer Whales, and the reader is referred to Grant and Ross (2002) for a more thorough synthesis of what is known about the risks that contaminants pose to Southern Resident Killer Whales.

Polychlorinated biphenyls (PCBs)

Surprisingly high concentrations of PCBs are found in both Southern and Northern Resident Killer Whales relative to marine mammals from other parts of the world (Ross et al. 2000). The PCB levels found in Transients and Southern Residents exceed those found in St. Lawrence Beluga Whales (*Delphinapterus leucas*) by a factor of two to four times, and are considerably higher than thresholds for PCB-associated reproductive impairment, skeletal abnormalities,

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immunotoxicity and endocrine disruption in pinnipeds (reviewed in Ross 2000). Ross et al. (2000) found that PCB concentrations increase with age in male Killer Whales, but decline in reproductively active females. Consistent with observations in other mammals, including humans, reproductive females pass PCBs to their offspring, particularly the first born, during gestation and lactation (Tanabe and Tatsukawa 1992; Borrell et al. 1995; Ylitalo et al. 2001).

Dioxins and furans

Levels of dioxins and furans were found to be low in the blubber of Resident and Transient Killer Whale populations in BC (Ross et al. 2000). This may be partly explained by low levels of dioxins and furans in their diet, but Killer Whales may also metabolize and excrete dioxin-like compounds more effectively than PCBs (Ross 2000).

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Table 1. Persistent organic pollutants that may pose a risk to Resident Killer Whales.

Pollutant	Use/Source	Persistent	Bio-accumulate	Risk
DDT (Dichlorodi-phenyl trichloroethane	pesticide used in some countries, banned in North America, persists in terrestrial runoff >30 years post ban, enters atmosphere from areas where still in use	yes	yes	reproductive impairment, immunosuppression, adrenal and thyroid effects
PCBs (Polychlorinated Biphenyls)	electrical transformer and capacitor fluid, limited use in North America but enters environment from runoff, spills, and incineration	yes	yes	reproductive impairment, skeletal abnormalities, immunotoxicity, and endocrine disruption
Dioxins and Furans	by-product of chlorine bleaching, wood product processing and incomplete combustion. Mills less of a source now. Current sources include burning of salt-laden wood, municipal incinerators, and residential wood and wood waste combustion; in runoff from sewage sludge, wood treatment	yes	yes	thymus and liver damage, birth defects, reproductive impairment, endocrine disruption, immunotoxicity, and cancer
PAHs (Persistent Polycyclic aromatic hydrocarbons)	by-product of fuel combustion, aluminium smelting, wood treatment, oil spills, metallurgical and coking plants, pulp and paper mills	yes	no	carcinogenic
flame retardants, esp. PBBs and PBDEs (Polybrominated diphenyl ethers)	flame retardants; in electrical components and backings of televisions and computers, in textiles and vehicle seats, ubiquitous in environment. 2/3 product PBDEs banned in Europe. Same two products withdrawn from North American marketplace in 2005, but one (deca) product still used globally.	yes	yes	endocrine disruption, impairs liver and thyroid
PFOs (Perfluro-octane sulfonate)	stain, water and oil repellent (included in Scotchgard until recently), fire fighting foam, fire retardants, insecticides and refrigerants, ubiquitous in environment	yes	yes but in blood, liver, kidney and muscle	promotes tumour growth
TBT, DBT (Tributyltin Dibutyltin)	antifoulant pesticide used on vessels	yes	yes	unknown but recently associated with hearing loss
PCPs (Polychlorinated paraffins)	flame retardants, plasticizers, paints, sealants and additives in lubricating oils	yes	yes	endocrine disruption
PCNs (Polychlorinated napthalenes)	ship insulation, electrical wires and capacitors, engine oil additive, municipal waste incineration and chlor-alkali plants, contaminant in PCBs	yes	yes	endocrine disruption
APEs (Alkyl-phenol ethoxylates)	detergents, shampoos, paints, pesticides, plastics, pulp and paper mills, textile industry found in sewage effluent and sediments	moderate	moderate	endocrine disruption
PCTs (Polychlorinated terphenyls)	fire retardants, plasticizers, lubricants, inks and sealants, enters environment in runoff	yes	yes	endocrine disruption and reproductive impairment

References: Primarily Grant and Ross 2002, but also Lindstrom et al. 1999; Hooper and MacDonald 2000; Kannan et al. 2001; Hall et al. 2003; Van deVijver et al. 2003; Rayne et al. 2004; Song et al. 2005.

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Polybrominated diphenylethers (PBDEs)

Preliminary evidence suggests that flame retardants may be a significant and emerging concern for Resident Killer Whales (Ross 2006). Moderate levels of PBDEs were observed in 39 biopsy samples collected between 1993-1996 from Southern Resident and Transient Killer Whales, and relatively low levels were observed in Northern Residents (Rayne et al. 2004). Based on analysis of blubber samples from Harbour Seals in Puget Sound, concentrations of PBDEs doubled every 3.1 years between 1984 and 2003, but appeared to decline in 2009 (Ross et al. 2013). Regulations prohibiting the manufacture of all PBDEs in Canada came into effect in July 2009. Additionally, PBDEs have been added to the Prohibition of Toxic Substances Regulations, which prohibits all PBDEs unless present in a manufactured article. Although the toxicity of PBDEs is not well understood, they have been associated with endocrine disruption in laboratory animals (Darnerud 2003). While no conclusive link could be established as a result of the numerous other lipophilic contaminants present, PBDE concentrations were negatively associated with thyroid hormones in Grey Seals (*Halichoerus grypus*, Hall et al. 2003). See Ross et al. (2009) for a review of research documenting some of the sources and properties, as well as the persistence and toxicity of PBDEs.

Numerous captive and semi-field studies of pinnipeds have provided evidence that POPs affect immune function (hence, resistance to disease), hormone levels, and reproductive health (Reijnders 1986; De Swart et al. 1996; Ross 2000; Nyman et al. 2003). Using this weight of evidence as a foundation, it is not possible to ignore the substantial risks that PCBs and other POPs present to Killer Whales in the northeast Pacific. Transient Killer Whales from Prince William Sound, Alaska (AT1 population) are highly contaminated, and have had no successful reproduction since 1984, providing perhaps a population-level glimpse into the effects of high POP burdens (Ylitalo 2001). High levels of toxic chemicals may also make Killer Whales more vulnerable to disease (Ross 2002). Jepson et al. (1999) found that Harbour Porpoises that died from infectious diseases had two to three times higher concentrations of PCBs than those that died from trauma.

Biological pollutants

Biological pollution may also threaten the health of Resident Killer Whales, their habitat and their prey. These pollutants may take the form of 'spill-over' pathogens from human activities (e.g. pets, livestock, migrations, habitat change), virulent, antibiotic- resistant bacterial strains arising as a result of the use of antibiotics or exotic species. Emerging infectious diseases are a growing concern for marine life, as naturally occurring host-pathogen relationships are altered through human activities such as disturbance, over-fishing, habitat destruction, climate change, or pollution (Ross 2002). Killer Whales whose immune system is compromised through chemical contaminants may be increasingly vulnerable to biological pollutants. Although no disease-related mass mortalities have been observed among BC's marine mammals, *Morbillivirus* has been detected in marine-dwelling River Otters (Mos et al. 2003), highlighting the potential risk of this or related pathogens to Killer Whales. In other areas, *Morbillivirus* outbreaks have caused mass mortalities of seals (Grachev et al. 1989; Kennedy et al. 2000) and dolphins (Aguilar and Borrell 1994). Pathogens such as *Morbillivirus* are capable of spreading extremely quickly (3,000 km/year), likely because in the marine environment there are few barriers to dispersal (McCallum et al. 2003).

The introduction of exotic species has changed habitats in other areas (e.g. Zebra Mussels in the Great Lakes, Eurasian Milfoil into freshwater lakes) and introduced species have the potential to impact local ecosystems here. In BC, Atlantic Salmon that have escaped from

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aquaculture operations have successfully spawned in freshwater (Volpe et al. 2000). The extent to which this is occurring and how Atlantic Salmon would compete with Pacific salmon, the preferred prey of Residents (Ford et al. 1998), is not well known at this time.

Trace metals

Trace metals occur naturally in the marine environment, but elevated concentrations sufficient to be a concern to marine mammals may be found in localized areas such as urban and industrial centres (Grant and Ross 2002). Some, such as cadmium, mercury, copper and lead may have toxic effects even at relatively low concentrations, and could impact Killer Whales, although effects on their prey and/ or habitat are more likely.

Little information is available on the levels and effects of trace metals on marine mammals in the Pacific. However, in a small sample of stranded Killer Whales, Residents showed higher levels of mercury than Transients (Langelier et al. 1990). In the western Pacific, all odontocete meat sampled from Japanese markets contained amounts of mercury that exceeded the level permitted for human consumption (Endo et al. 2003). However, the historical exposure of high trophic level marine mammals to naturally elevated concentrations of mercury in prey has resulted in their evolved ability to detoxify this toxic metal through the formation of mercury-selenium crystals in the liver (Martoja and Berry 1980).

Sources of contaminants

Monitoring the sources and levels of environmental contaminants is particularly challenging given that each year, up to 1,000 new chemicals are released into the environment globally (Haggarty et al. 2003). The high contaminant levels found in Southern Residents may arise from consuming prey that are from industrialized areas near the BC-Washington border, which are more contaminated than the prey of Northern Residents (Ross et al. 2000; Cullon et al. 2009). In Japan, odontocetes that travelled in more industrialized areas carried higher contaminant loads than those found in more remote areas (Endo et al. 2003). In a study of Harbour Seals in BC and Washington, Ross et al. (2004) found that although PCB levels were a concern in all areas, seals from Puget Sound were seven times more PCB-contaminated than were seals from the Strait of Georgia. This suggests that the food web within Puget Sound has been contaminated with PCBs, such that Killer Whales consuming prey items from this region may be vulnerable to increased contaminant exposure. Chinook Salmon, one of the Resident Killer Whales' preferred prey species (Ford et al. 1998; Ford and Ellis 2005), feed in the upper trophic levels in the food web, and those from Puget Sound are relatively contaminated with PCBs (O'Neill et al. 1998; Cullon et al. 2009). Studies suggest that most salmonids are 'importing' contaminants from their time at sea, reflecting global environmental contamination (O'Neill et al. 1998; Ewald et al. 1998).

Although DDT was banned in Canada in 1989 and over 40 years ago in the United States, it continues to enter the ocean from terrestrial runoff (Hartwell 2004) as well as from atmospheric transport from countries where it is still in use. Dioxins (PCDDs) and furans (PCDFs) represent highly toxic by-products of chlorine bleaching and associated wood treatment, and incomplete combustion. Source controls and regulations have greatly reduced their input in to the coastal environments of BC and Washington.

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Contaminants enter the marine environment from local, regional and international sources. These are discussed in detail in Haggarty et al. (2003). Local point sources of contaminants into the marine environment include:

- pulp and paper mills
- wood treatment facilities
- municipal effluent outfalls
- petrochemical facilities and
- mines

Indirect sources (non-point source pollutants) include:

- sewer overflows (e.g. organic wastes, household products, pharmaceuticals and personal care products)
- urban runoff and storm-water drainage (e.g. pesticides, metals, hydrocarbons, herbicides and animal wastes)
- agriculture (e.g. pesticides, herbicides, animal wastes and antibiotics)
- forestry (e.g. pesticides, herbicides, fire-control chemicals, anti-sapstain chemicals, log booms and storage areas) and
- aquaculture (e.g. organic wastes, chemical contaminants [antibiotics, feed additives, pharmaceuticals, pesticides and antifouling on nets])

Garrett and Ross (2010) describe the Canadian and U.S. federal, provincial and state agencies responsible for the monitoring, mitigation and regulation of environmental contaminants and their sources.

Shipping also represents a risk to the ecological integrity of coastal regions. Both intentional and unintentional discharge of chemicals and biological waste are added sources of pollution in all coastal areas, but particularly in high traffic zones. In addition, the introduction of exotic and invasive species carried on ship hulls and in ballast water have the potential to dramatically alter the habitats they have colonized (e.g. European Green Crabs, Zebra Mussels, the alga *Caulerpa taxifola*). Numerous invasive invertebrates have been found in the ballast water of ships at anchor in Vancouver Harbour (Levings et al. 2004), although the ecological significance of such introductions is unclear.

In addition, some pollutants such as PCBs, DDT and other chemicals are transported through atmospheric processes and ocean currents, and may travel to the west coast of North America from as far away as Asia in less than 5-8 days (Wilkening et al. 2000). Consequently, the northeastern Pacific may be a sink for globally produced POPs (Ross et al. 2000; 2004; 2006).

Certain 'legacy' POPs such as PCBs and DDT have been phased out of industrialized countries and their concentrations are slowly decreasing in the marine environment (Muir et al. 1999), although these declines have levelled off (Addison and Stobo 2001). However, levels of other 'new' POPs such as deca-PBDEs continue to increase globally, and represent the PCBs of the future (Ross 2006; Law et al. 2014). Unlike PCBs, which were generally used in a limited range of applications such as electrical transformers and capacitors, PBDEs have been widely used in many industrial and consumer applications and are incorporated into plastics, textiles and foam.

4.2.2. Reduced prey availability

Answering the question as to whether Killer Whales may be prey limited is complex. While the year-round diet of Resident Killer Whales is not well known, at certain times of the year salmon,

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particularly Chinook and Chum, are known to be important prey (see section 3.4.1. Diet). Ford et al. (2005) found that trends in the mortality rates of Southern and Northern Resident Killer Whales were correlated with each other, and that both were strongly related to fluctuations in the abundance of Chinook Salmon, but not Chum Salmon. Birth rates were also correlated with Chinook Salmon abundance, but more weakly than mortalities.

Less is known about the prey of Resident Killer Whales and their distribution and abundance during the months of November to April. This is due to the inherent challenges of studying whales during the winter months, and because the whales move from inshore areas where they are more concentrated during summer and range widely along the coast during the winter and early spring. Thus when considering the availability of prey to Resident Killer Whales, it should be noted that we have limited knowledge of what other prey species may be important to them, and the discussion below focuses on species that are known to be important.

Changes in salmon abundance and availability

Assessing the status of salmon stocks and their availability to Resident Killer Whales is challenging to interpret and often fraught with controversy. Until the middle of the 20th century, many wild salmon stocks experienced significant declines due to overfishing, habitat degradation, restrictions in access to spawning grounds due to landslides, and changes in ocean productivity (summarized in Krahn et al. 2002 and Wiles 2004). The situation changed between 1975 and 1993, and the total abundance of North Pacific salmon doubled (Bigler et al. 1996) due to hatchery enhancement, changes in fisheries management practices and a favourable climatic regime (Bigler et al. 1996; Beamish et al. 1997). Since the early 1990s many of these stocks have declined in number and specific causes have not been identified. Some studies have questioned the role of enhancement (Beamish et al. 1997, and reviewed in Gardner et al. 2004) but other potential problems such as marine survival appear to be a factor. At present 28 of 52 different wild Pacific salmon stocks in the lower 48 states of the U.S. are considered at risk under the U.S. ESA (NOAA 2017). In southwestern BC by 1990, salmon from one-third of the spawning rivers had been lost or were seriously depleted (Riddell 1993). Recognizing that many salmon stocks are under threat, Fisheries and Oceans Canada announced a new Wild Salmon Policy (WSP) in December 2004 (DFO 2005), designed to restore and maintain healthy and diverse wild salmon populations and their habitat. Since 2005, DFO has used the WSP to guide its work toward restoring healthy salmon populations, and development of a detailed implementation plan for the WSP is underway. If these and other actions are successful, salmon may gradually become more available to Resident Killer Whales.

Resident Killer Whales tend to be found in high concentrations in specific areas during the period when salmon are returning to rivers to spawn. This likely reflects the fact that salmon are not as widely dispersed at this time as they are during the rest of their life cycle. There is a great deal of diversity in the timing of the spawning period for salmon. For example, the Upper Columbia River has a spring run and a summer/fall run of Chinook. These runs are considered distinct stocks because they do not interbreed. The spring run is Endangered under the ESA in the U.S., yet the summer/ fall run is not at risk (NOAA 2017). This illustrates the need to consider the timing of the spawning period of each salmon stock when assessing the availability of salmon for Killer Whales, in order to ensure an adequate year-round food supply. Chinook Salmon are longer lived than other salmon species and spawn at different ages (Healey 1991). It is likely that their year-round availability in nearshore waters is a key factor, along with body size and lipid content, in Chinook being the preferred salmonid prey of Resident Killer Whales (Ford and Ellis 2005).

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To address the scientific uncertainty regarding the impact of sea lice on salmon, and the relationship of this to Killer Whales, DFO and others are conducting scientific research to assess and protect the health of the wild Pink and Chum Salmon resource in the Broughton Archipelago.

Depressed Chinook stocks

Chinook Salmon, the principal prey of BC's Resident Killer Whales, is one of the least abundant species of salmon in BC (Riddell 2004). However, unlike other salmon, many populations of Chinook remain in nearshore waters during the ocean phase of their life cycle. As a result they are available on a more year-round basis to Killer Whales, but are also more vulnerable to pollution (discussed in section 4.2.1 Environmental contaminants).

Chinook abundance dropped in the 1970s and 1980s, but escapements increased until the early 1990s in some rivers, primarily due to hatchery production (Beamish et al. 1997). In Washington, hatchery fish now account for about 75% of all harvested Chinook (Mahnken et al. 1998 in Wiles 2004). In un-enhanced river systems in central and northern BC, Chinook numbers remain depressed (Riddell 2004) and nine of 17 Chinook stocks in Washington, Oregon and California are listed under the ESA (NOAA 2017). It is likely that Chinook is an important limiting factor in the population dynamics of Resident Killer Whales (Ford et al. 2005; Ward et al. 2009; Ford et al. 2010). This may explain why Southern Resident Killer Whales have appeared in places as distant as off the Columbia River and northern California to the south and off southeastern Alaska in the north (Ford et al. 2017). Their presence was associated with unusually large returns of Chinook Salmon, which they may have had to seek out because of less abundant prey within their traditional range. When prey availability is reduced, Killer Whales may be forced to spend more time and travel greater distances to forage for their food, or switch to less profitable prey, which could lead to lower reproductive rates and higher mortality rates.

In addition to reduced Chinook abundance, the quality of individual fish appears also to have declined over recent decades. Average weights of Chinook Salmon in nine populations from BC to California declined by up to 45% between 1975 and 1993 (Bigler et al. 1996). Thus, the nutritional yield of each Chinook Salmon may be significantly less today than it was in past years, which may have an impact on the overall foraging energetics of Resident Killer Whales.

4.2.3. Disturbance

All cetaceans, including Resident Killer Whales, are being subjected to increasing amounts of disturbance from vessels, aircraft, and anthropogenic noise (IWC 2004). Both private and commercial vessel traffic have increased dramatically in recent years, and Killer Whales must navigate in increasingly busy waters (Osborne 1999; Foote et al. 2004). Industrial activities such as dredging, drilling, construction, seismic testing and military sonar, and other vessel use of low and mid-frequency sonars also impact the acoustic environment (Richardson et al. 1995; NRC 2003). The means by which physical and/or acoustic disturbance can affect Resident Killer Whales at both the individual and population level are not well understood, but may depend on whether the disturbance is chronic (such as whale watching) or acute (such as seismic surveys). Other factors, including the animal's condition, previous exposure (potentially causing sensitization or habituation), age, sex, and behavioural state also influence how disturbance affects whales (e.g. Williams et al. 2014). In addition, environmental factors, such as El Niño events that may change the availability of prey, may make animals more vulnerable to disruption than they would be otherwise. The sources of both physical and acoustic disturbance and their potential impact on Resident Killer Whales are discussed in greater detail below.

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A current challenge in studying the effects of disturbance is in finding informative ways to describe and measure them, and to date the question of whether a source of disturbance is likely to result in effects at the population level can be difficult to answer. Responses to disturbance may range from slight differences in surfacing and breathing rates to active avoidance of an area. Even if the disturbance causes immediate death, carcasses are rarely recovered (regardless of the cause of death, only 6% of Killer Whale carcasses are recovered, DFO-CRP unpublished data). As well, animals may show no obvious behavioural responses to disturbance, yet still be negatively affected. For example, Todd et al. (1996) found that Humpback Whales remained in the vicinity of underwater explosions, and showed no obvious behavioural responses to them. However they experienced significantly higher entanglement rates during this time, and necropsies of two whales that drowned in nets revealed acoustic trauma (Ketten et al. 1993). Thus a lack of a measurable behavioural response to a stimulus does not necessarily imply the disturbance does not have negative consequences. A parallel may exist with humans, since people exposed to chronic noise lose their hearing more quickly than those that are not exposed to chronic noise. The consequences of hearing loss for cetaceans are likely fatal.

Measures for changes in behaviour may also not be subtle enough to detect disturbance. Whitehead (2003) re-analyzed data that were reported to indicate that Sperm Whales did not show behavioural responses to surveys using high-intensity sound. He segregated the responses according to whale density in the area and found that contrary to earlier conclusions, when whale density was low, Sperm Whales avoided seismic activity. When densities were high, whales remained in the vicinity. He suggested that whales may have been reluctant to leave a rich feeding area despite the disturbance.

Whale watching

Commercial whale watching has grown dramatically in BC, with just a few boats carrying less than 1,000 passengers per year in the late 1970s and early 1980s to 80 boats carrying half a million passengers per year in 1998 (Osborne 1991; Baird 2002; Osborne et al. 2003). In 2015, there were 93 active commercial whale watching vessels in the Salish Sea alone (Seely et al. 2017). Whale watchers tend to focus on Resident Killer Whales in their most predictable locations, Haro Strait and Johnstone Strait. Vessels in the vicinity of whales include privately owned kayaks, sailboats and powerboats as well as commercial whale watch vessels. While the benefits of public education and increased awareness that can be achieved through guided whale watching are well established, concern over the effects of whale watching on Killer Whales has grown with the industry itself. This concern has prompted the development of industry initiated viewing guidelines and has resulted in studies that have attempted to measure responses of the whales to such focused attention (e.g. Kruse 1991; Williams et al. 2002a; b; Williams et al. 2014), as well as the behaviour of boaters around whales (e.g. Jelinski et al. 2002). Whale watching activities have the potential to disturb marine mammals through both the physical presence and activity of boats, as well as the increased underwater noise levels boat engines generate.

Under the Fisheries Act in Canada and the MMPA in the U.S., disturbance (harassment) of marine mammals, including Killer Whales, is prohibited. No special provisions or exemptions to this prohibition have been made for commercial whale watch operators and the commercial fleet is subject to the same regulatory restrictions as recreational boaters. Voluntary guidelines for

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viewing marine wildlife[3] were developed by DFO, the National Marine Fisheries Service (NMFS), and collaborators in 2002 to protect marine mammals, including Resident Killer Whales, from disturbance. These guidelines are reviewed and revised periodically. Additionally, industry associations, including the Pacific Whale Watch Association (PWWA) and the North Island Marine Mammal Stewardship Association (NIMMSA) have developed codes of conduct for marine mammal viewing by member businesses (NIMMSA 2016; PWWA 2017).

In 2011, the U.S. National Oceanic and Atmospheric Administration (NOAA) adopted federal vessel regulations to prohibit vessels from approaching Killer Whales within 200 yards (183 metres) and from parking in the path within 400 yards (366 metres) of Killer Whales. These regulations apply to all vessels in inland waters of Washington State, with exemptions for vessels that are actively engaged in commercial or First Nations fisheries, for research vessels under permit, ships in shipping lanes and government vessels in the course of official duties. Effective July 11, 2018, amendments to the Canadian Marine Mammal Regulations under the Fisheries Act include a minimum approach distance of 100 metres for most whales, dolphins and porpoises to legally protect these animals from human disturbances as well as a new mandatory requirement for all marine vessels (including recreational boats) to stay at least 200 meters away from Killer Whales in BC and the Pacific Ocean (DFO 2018).

There are several projects that focus on educating the boating public both on and off the water about appropriate conduct in the vicinity of marine mammals. They also monitor vessel activity in the presence of whales. Current projects include the Soundwatch Boater Education Program in the San Juan Islands; Straitwatch in adjoining Canadian waters (Haro and Juan de Fuca Straits), Johnstone Strait, and occasionally off the west coast of Vancouver Island; and the Robson Bight Marine Warden Program in Johnstone Strait, while past projects include the Marine Mammal Monitoring Project in Victoria, BC. All of these programs are run by non-profit organizations that do not have guaranteed funding. Smith and Bain (2002) found that commercial operators increased their compliance with a voluntary 0.4 km 'no boat' zone in the San Juan Islands from less than 80% to over 90% when Soundwatch was present on the water.

Boat activity has been linked to short-term behavioural changes in Resident Killer Whales (Kruse 1991; Smith and Bain 2002; Williams et al. 2002a; 2002b). They have been known to swim faster, travel in less predictable paths, alter dive lengths, move into open water, and alter normal behaviour patterns at the surface in response to vessel presence (Kruse 1991; Williams et al. 2002a; 2002b). Foote et al. (2004) found that Southern Resident Killer Whales significantly increased the duration of their calls when boats were present, and suggested that this was an adaptation to the masking effects caused by increased noise levels. Additionally, Holt et al. (2009) found that Killer Whales increased the amplitude of their calls in response to increased vessel noise.

Although studies have shown short-term responses of Killer Whales to whale watching vessels, the long-term effects of whale watching on the health of Killer Whale populations are not known (Trites et al. 2002). Increased whale watching operations between the mid-1980s and 2001 may have resulted in a potential 20% increase in energetic expenditures of Killer Whales due to increased swimming velocity (Kriete 1995; 2002). Bain (2002) found that although the decline of Southern Residents followed the increase in commercial whale watching, the relationship was much more complex. He suggested that other variables, such as changes in the availability of

[3] Be Whale Wise Guidelines for marine wildlife viewing are available at: http://www.bewhalewise.org/marine-wildlife-guidelines/

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prey, were also likely significant. Whether whale watching is a significant threat to Killer Whales or not, both the Northern and Southern Resident populations continue to return to their traditional summer ranges despite increased whale watching activity. This may reflect their strong cultural behaviours or the distribution of their prey.

Underwater noise

At the time the COSEWIC status report on Killer Whales was written (Baird 2001), relatively little was known about the effects of underwater noise on marine mammals. Previous research had focused primarily on powerful noise sources with the potential to cause immediate injury or death, rather than chronic lower level noise sources (Richardson et al. 1995). Since then, there has been a rapidly growing awareness that noise is a significant threat that degrades habitat and adversely affects marine life (IUCN 2004; IWC 2004). It is estimated that ambient (background) underwater noise levels have increased an average of 15 dB in the past 50 years throughout the world's oceans (NRC 2003).

Killer Whales have evolved in the underwater darkness using sound much the way terrestrial animals use vision: to detect prey, to communicate and to acquire information about their environment. Anthropogenic noise can interfere with all these activities in critically important ways, such as disrupting communication, reducing the distance over which social groups can detect each other, masking echolocation and hence reducing the distance over which the animals can detect their prey, potentially displacing them from preferred feeding habitats, displacing prey, impairing hearing, either temporarily or permanently and in extreme cases causing death (Bain and Dahlheim 1994; Barrett-Lennard et al. 1996; Bain 2002; Erbe 2002; NRC 2003; Au et al. 2004).

The challenges of using and interpreting behavioural responses of marine mammals to noise as a measure of disturbance are discussed above. Opportunities to measure physiological responses to anthropogenic noise are much rarer, but provide insight into the mechanisms by which noise could impact animals at the individual, and potentially population level. Physiological responses to anthropogenic noise that have been measured in marine mammals include both temporary and permanent hearing threshold shifts, the production of stress hormones and tissue damage, likely due to air bubble formation or as a result of resonance phenomena (Ketten et al. 1993; Crum and Mao 1996; Evans and England 2001; Finneran 2003; Jepson et al. 2003; Fernandez et al. 2004). Marine mammals, including Killer Whales, may be particularly vulnerable to resonance because of the air-filled cavities in their sinuses and middle ear, their lungs and small gas bubbles in their bowels. While the mechanism by which high-intensity sound can cause lethal and sub-lethal effects on cetaceans is not completely understood (Fernandez et al. 2004; Piantadosi and Thalmann 2004), loud anthropogenic sources of noise, particularly low and mid-frequency military sonars, have been implicated in mass stranding and mortality events around the world, and the subject urgently merits further study. Animals already affected by anthropogenic stressors such as environmental contaminants may be particularly vulnerable to additional stresses such as noise (Sih et al. 2004).

Sounds travel as waves much more quickly through water than air (1,530 vs. 340 m/s). The perceptual features of sound, "pitch" and "loudness," have physical analogues. How high or low-pitched a sound is can be described in terms of its frequency, and is measured in hertz (Hz). Human hearing ranges from approximately 20 to 20,000 Hz (20 kHz), and is best between 600 and 2,000 Hz. The peak hearing sensitivity of Killer Whales is at approximately 20 kHz, although they show behavioural responses to sound from 75 Hz to over 100 kHz (Hall and Johnson 1972;

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Syzmanski et al. 1999). Killer Whale calls contain energy throughout this frequency range, and many echolocation clicks are centered at 20 kHz.

The 'loudness' of a sound is described in terms of its pressure. For the purposes of consistency, the units of measure used here are dB_{RMS} re 1 μPa. By convention, noise sources are compared in terms of their "source levels" by estimating the level that would be measured at 1 m from the underwater sound source. In general, the further away from a sound source, the quieter the received sound level, although physical and oceanographic features of the marine environment can affect how quickly a sound attenuates (gets quieter). High frequency sounds attenuate much more rapidly than low frequency sounds under uniform conditions in the open ocean, but a number of factors influence sound propagation and high frequencies may propagate further than low frequencies in shallow water or places with complex bottom terrain. Temperature, salinity, depth, bottom topography and other physical factors must all be taken into account to accurately predict the intensity of sound reaching a whale.

The characteristics of some underwater noise sources are briefly described in Table 2. It is important to consider the length of time that animals are exposed to sounds, and sound loudness and frequency. As well, some sounds are continuous, whereas others are pulses of sound that are generated intermittently. The frequency composition also varies, ranging from broadband sounds such as seismic surveys, to narrowband sounds such as military sonar that are only broadcast across a limited range of frequencies.

Sounds at received levels of 120 dB typically disrupt the behaviour of 50% of exposed cetaceans (Richardson et al. 1995). Williams et al. (2002) found behavioural changes in Northern Residents at received levels estimated at about 105-110 dB. However, with increasing use of loud, low frequency noise in activities such as ocean acoustic tomography and low frequency active sonar, which are detectable at ranges of thousands of kilometres, there has been pressure to raise the threshold for regulatory intervention. In the United States, NMFS recently updated guidance on underwater acoustic threshold levels for avoiding permanent hearing threshold shifts (PTS) in marine mammals (NMFS 2016). This guidance expressed thresholds for hearing shifts for impulsive sounds in terms of both the cumulative sound exposure level and peak sound pressure level. Onset of PTS is considered to occur when either of the two metrics is exceeded. For cetaceans in the mid-frequency hearing group, including Killer Whales, the PTS acoustic thresholds (received levels) for impulsive sounds were identified as 230 dB for the peak sound pressure level and 185 dB for the cumulative sound exposure level. For non-impulsive sounds, the PTS onset acoustic threshold for mid-frequency cetaceans is 198 dB. It should be noted that these acoustic thresholds are just one tool for determining and mitigating the impacts of sound exposure on marine mammals. Behavioural impact thresholds and auditory masking assessments should also be considered (NMFS 2016).

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Table 2. Signal structure, frequency range and source levels of anthropogenic noise. Modified from Table 2-1b in NRC (2003) and Table 6.8 in Richardson et al. (1995).

Source	Signal Structure	Frequency Range	Source Level (dB re 1 μPa at 1 m)
Seismic surveys	impulsive	broadband >0 Hz to >100kHz	>240
Military Sonar			
surveillance	pulsed tones	<1kHz	>230
tactical	pulsed tones	>1kHz to < 10kHZ	200 to 235+
weapon/ counter weapon	pulsed tones and wideband pulses	>10kHz to 100kHz	190 to 220
Construction	broadband and tones	<10kHz to 10+kHz	NA
Dredging	broadband and tones	<10Hz to <10kHz	NA
Explosions	impulsive	broadband	>240
Commercial shipping	continuous	10Hz to >1kHz	160 to 200
Commercial sonars	pulsed tones	28kHz to >200kHz	160 to 210

Military sonar

Military active sonar is used in military operations for target detection, localization and classification (NRC 2003). Unlike passive sonar systems, which listen for sounds, active sonar units transmit pulses of tones at frequencies from <1 to >100 kHz and source levels of 200-235 (or more) dB re 1 μPa at 1 m depending on the application (Evans and England 2001). There is now a growing weight of evidence that these sources of underwater noise may pose a significant threat to cetaceans. Active military sonar has been associated with increased strandings of beaked whales and Humpback Whales (numerous incidents summarized in IWC 2004). In October 2004, the European Parliament called on its member nations to suspend the use of all high-intensity military sonar until further research can determine what effects it may have on marine life (European Parliament Resolution P6 TA, 2004).

For security reasons, information on the specifications of military active sonar is difficult to obtain, and much of what is available is based on U.S. Navy equipment. Given that the U.S. Navy engages in joint operations with the Canadian military in both the Strait of Georgia and off the west coast of Vancouver Island, and that both Northern and Southern Resident Killer Whales travel in U.S. waters, the threat that active sonar may pose must be considered and precautionary measures should be considered by both navies. Southern Resident Killer Whales may be especially vulnerable because they spend significant time in the waters of Washington State, where a large naval exercise area runs parallel to the coast.

Military active sonars may be categorized as: surveillance (low frequency, <1 kHz), tactical (mid frequency, 1 to 10 kHz), and weapon/counter weapon (high frequency, >10 - 100 kHz, see Table 2). Tactical sonars can have detection ranges of 10s of kms, and surveillance low frequency active sonars can be detected at ranges of 100s of kms (NRC 2003). The use of SURTASS (Surveillance Towed Active Sensor System) LFA (Low Frequency Active) sonar has been controversial because of concerns about its potential effects on marine life (EIS 2007).

The Canadian Department of National Defence's Research Agency (DRDC) conducted research to investigate low frequency active tactical sonar through the Towed Integrated Active Passive Sonar (TIAPS) off the Atlantic Coast (Bottomely and Theriault 2003). The maximum

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source level of the TIAPS system was 223 dB re 1μPa @ 1m (Theriault pers. comm. 2007). Mitigation measures were applied (see Bottomely and Theriault 2003 for details) and no incidents involving marine mammals were reported. There are no plans to acquire this particular sonar for Canadian military use, and present defence policy requires that any future acquisition and testing of sonar systems will include environmental considerations (Freeman pers. comm. 2007).

Mid-frequency tactical sonar systems operating at 1-10 kHz are used to detect mines and submarines. They have been associated with mass stranding events in the Bahamas, Canary Islands, Greece and the Gulf of California (IWC 2004). Mid-frequency sonar exercises conducted by the USS Shoup on May 5, 2003 in Haro Strait were reported to correspond with changes in behaviour in members of J pod that were foraging 47 km away at the time, and resulted in behaviour more extreme than observed in response to any other disturbance. The pod was observed trying to leave the area while the ship was 22 km away and ultimately pod members separated and left the area in different directions when the USS Shoup passed by at a range of 3 km (D. Bain, personal observation and personal communication; K.C. Balcomb, in Wiles 2004). Up to 100 Dall's Porpoises and a Minke Whale were also seen leaving the area at high speed. Extensive examination of the 11 concurrent Harbour Porpoise strandings found no definitive signs of acoustic trauma, but the cause of death could not be determined for six animals, and the possibility of acoustic trauma as a contributory factor in the deaths of the remaining five porpoises could not be ruled out (lesions consistent with both acoustic trauma and alternative explanations were observed; NMFS 2004). Further, all members of J pod were still alive more than two years after the incident.

The Canadian Navy has five principal types of military sonar emitters. The SQS 510 sonar is the primary mid-frequency sonar used for anti-submarine search and is the most powerful. It is currently fitted to six ships on the west coast. In comparison, the U.S. Navy's SQS 53C sonar, such as that used on the USS Shoup, emits ten times more energy than the Canadian 510 sonar. The Canadian Navy also uses helicopter dipping sonars and active sonobuoys, though these emit far less energy than the 510 (D. Freeman, Department of National Defence, pers. comm. 2007).

The Canadian Navy uses active sonar during training exercises and equipment testing in designated training areas. However, sonar operations may also take place in other waters along the Pacific coast. To mitigate the potential impacts of sonar use, Department of National Defence (DND) ship personnel receive training in marine mammal identification and detection. The current Maritime Command Order 46-13 for marine mammal mitigation is to avoid transmission of sonar any time a marine mammal is observed within the defined mitigation avoidance zone specific to each type of sonar. These zones were determined using the interim NMFS thresholds for potential behavioural disturbance (160 dB) and physical injury (180 dB) (Freeman pers. comm. 2007). Concerns remain that some impacts may occur beyond the visible horizon, and these will be difficult or impossible to observe or mitigate.

Canadian test ranges are also used by other navies to test equipment and train personnel. They follow Canadian procedures for use of these ranges, which includes marine mammal impact assessment and mitigation (Freeman pers. comm. 2005). When conducting joint exercises in Canadian waters, other navies are provided direction including sonar mitigation protocols, prior to and during exercises. As little is known about the offshore distribution of Resident Killer Whales, especially during the winter months, they may be vulnerable to the use of sonar in the offshore ranges.

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Seismic surveys

Airguns are used in geophysical surveys and to detect and monitor earthquake faults and other structures such as oil and gas deposits beneath the sea floor. The following information on the characteristics of seismic surveys comes from NRC (2003) unless mentioned otherwise. Like military sonar, seismic surveys generate high intensity sounds. Most of their energy is concentrated at frequencies between 5-300 Hz and maximum pressure levels of 260 dB re 1μPa at 1 m. However, unlike military sonars, airgun arrays used for seismic surveys generate broadband noise that extends to over 100 kHz (Calambokidis et al. 1998).

Current survey methods use one or more airguns that are towed behind a ship. Airgun arrays range in size from 2,000-8,000 cu in, depending on the application. The pulses of noise fired from these guns penetrate the seafloor surface for distances of up to 10 km deep. The arrays are towed at approximately 2.6 m/s (5 knots) and the airguns are fired every 10-12 seconds. The question of whether Killer Whales could sustain swimming the long distance necessary to avoid these sound sources needs to be addressed. Seismic surveys using powerful airgun arrays have been detected at distances of over 3,000 km from their source (Niekurk et al. 2004).

DFO receives occasional applications for permits for geophysical surveys from industry, government agencies such as Natural Resources Canada, and from universities. Currently, however, a moratorium on offshore oil and gas exploration in BC remains in place. As awareness is growing on the potential threats of high intensity sound on marine life (IUCN 2004; IWC 2004), the potential impacts of broadband high energy noise on Killer Whales must be considered. DFO has developed the Statement of Canadian Practice with respect to the Mitigation of Seismic Sound in the Marine Environment, which is reviewed annually to allow for revisions to reflect new technologies, scientific findings, and industry practices (DFO 2016a). In the Pacific Region, each proposed seismic survey is reviewed and case by case mitigation measures are developed based on the species of concern in the area of the survey.

Systematic observations of cetaceans during seismic surveys have been carried out in UK waters, and have shown that Killer Whales and other cetaceans were generally seen further away during periods when airgun arrays were firing (Stone 2003). Behavioural studies in other areas have shown mixed responses to seismic surveys. Grey and Bowhead Whales appeared to avoid seismic surveys (Malme and Miles 1987; Ljungblad et al. 1988; Myrberg 1990). Male Sperm Whales and feeding Humpback Whales did not avoid seismic surveys (Malme et al. 1985; Madsen et al. 2002). A seismic survey in Puget Sound showed mixed results between species, with some, such as Grey Whales, exhibiting ambiguous responses to the survey while others, such as Harbour Porpoises, tolerating only relatively low exposure levels before leaving the area (Calambokidis et al. 1998).

For obvious ethical reasons, there are no experimental studies of the physical effects of seismic surveys on cetaceans. However the internal structure of the cetacean ear resembles that of both fish and terrestrial mammals (Fay and Popper 2000). A small (20 cu in) airgun has been shown to cause permanent hearing loss in caged fish (McCauley et al. 2003), so it is possible that airguns may be capable of damaging cetacean ears if the whales cannot avoid the sound source. Since Killer Whales are known to be exquisitely dependent on sound for orientation, navigation, locating and catching food, communication, and social interactions, the consequences of severe hearing loss could be fatal.

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Commercial sonar

Commercial sonar systems are used in a wide variety of vessels for fishing, navigation (depth sounders), bottom-mapping and detecting obstacles (e.g. side scan sonars). They are generally standard equipment on any vessel over 5 m. These sonars typically generate narrowband sounds at higher frequencies and lower power than military sonars. High frequency sounds are more easily focused into narrow beams and attenuate more quickly than low frequency sounds. Thus the volume of water they influence is smaller. There are many models of commercial sonars, but it is only the units that operate below 100 kHz, the upper limit of Killer Whale hearing, that are of concern. Whales may be able to avoid these sources of sound when boats are widely dispersed, but when boats are concentrated in high traffic areas Killer Whales may have no choice but to travel through heavily ensonified areas.

Shipping

Commercial shipping has increased dramatically in recent years. For example, between 1995 and 1999 the worldwide commercial shipping fleet increased 12% (NRC 2003). There are few studies that have measured changes in the background underwater noise levels over time, but those that have suggest that increased vessel traffic is responsible for the increase in ambient noise over the last 100 years (e.g. Andrew et al. 2002). In the northern hemisphere, shipping noise is the dominant source of ambient noise between 10 to 200 Hz (NRC 2003). While shipping energy is concentrated at low frequencies, ships produce significant amounts of high frequency noise as well. Studies are currently underway to understand and mitigate the impacts of shipping activities and commercial vessel traffic noise on some marine mammal species at risk. For example, in 2017, the Enhancing Cetacean Habitat and Observation (ECHO) initiative led by the Vancouver Fraser Port Authority coordinated a vessel slowdown trial in Haro Strait to better understand and measure the level of noise reduction that can be achieved through reduced vessel speed.

Permitted close approaches

Certain activities have the potential to disturb and/or injure whales because they require physical contact with whales or close approaches by boats for extended periods of time. As a result, in both Canada and the U.S., researchers and filmmakers must obtain federal permits if their projects require close approaches or physical contact with Killer Whales. Close approaches can disturb whales both physically and acoustically. Much of the research on Killer Whales is conducted using boats ranging in size from a few metres to vessels over 30 m, although some is land-based (e.g. Orcalab on Hanson Island, the Robson Bight Marine Warden Program on West Cracroft Island, Johnstone Strait). A boat at 10 m from a whale will be approximately 20 dB louder than a boat at 100 m based on spherical spreading (Richardson et al. 1995).

Photo-identification studies require that all whales in the group be photographed before the encounter is considered complete, and good quality photographs typically mean that whales must be approached to within 30 m (approximately 10 dB louder than at 100 m). Prey fragment sampling, which is providing insight into the diet of Resident Killer Whales, involves approaching the area where a whale has surfaced after it has finished actively feeding. Biopsy darting, a method used in genetic and contaminant studies, also involves close approaches by boats, and recommendations arising from the NOAA Cetacean Systematics Workshop in La Jolla California, in April-May 2004 include darting juveniles (Waples and Clapham 2004). The possible health risks of darting young calves have not been evaluated.

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Some satellite tags and time-depth recorders (TDRs) are applied externally to Killer Whales. They are used to monitor the movements of whales, but may disturb them during the initial application and /or during the time that they adhere to the skin. Newer technologies involving satellite tags and TDRs that are implanted in the skin or muscle pose the additional risk of injuring Killer Whales. From 2013 to 2016, NOAA used satellite tags that attach to Killer Whales through darts that implant into the skin and tissue of these whales. The tags provided information about movements and habitat use of Southern Resident Killer Whales and were used to address knowledge gaps regarding winter distribution of this population. This tagging effort was suspended in April 2016 following the death of Southern Resident L95, after the cause of death was determined to be an infection that was likely introduced through the tag wound (NOAA 2016).

Other forms of disturbance

The number of boats on the water has increased dramatically in recent years. This increase in traffic has the potential to disrupt Killer Whales simply because more vessels are passing through their habitat and potentially disturbing how whales move through the available space. This is most evident when whales are interrupted from their normal activities in order to avoid a collision. While collisions between whales and vessels are relatively rare, when they do occur they can cause significant injury or death (Ford et al. 2000). A science based review of the effectiveness of recovery measures for Southern Resident Killer Whales conducted in 2017 identified vessel strikes as an emerging threat to this population and measures have been suggested to address this threat. Refer to the Review of the Effectiveness of Recovery Measures for Southern Resident Killer Whales (DFO 2017c) for further information.

Personal watercraft (PWC) or 'jet skis' may be another potential source of disturbance or injury to Killer Whales. PWC are capable of much more erratic or unpredictable manoeuvres than traditional high speed vessels. As a result they pose a collision risk to Killer Whales and other wildlife. PWC have been banned in the San Juan Islands and in portions of the Monterey Bay National Marine Sanctuary, but they are not banned in the coastal waters of BC, with the exception of the inner waters of Vancouver Harbour. Underwater noise emissions of PWC are reported to consist of broadband energy between 100 Hz and 10 kHz (Erbe 2013).

While Resident Killer Whales must travel in high vessel traffic areas such as Johnstone Strait and the Strait of Georgia, they also must negotiate both commercial and recreational sports fishing boats specifically targeting salmon in 'hot spots' that are also good feeding areas for Killer Whales. This includes areas in the vicinity of sports fishing lodges. Conflict for space may force Killer Whales to alter their foraging behaviour in order to successfully capture prey or to avoid collision or entanglement (see section 4.2.5).

Certain industrial activities such as construction, drilling, pile driving, pipe laying and dredging may also disrupt Killer Whales. Construction is also a source of underwater noise. Physical structures, including net pens for aquaculture and permanent structures (e.g. wharves), may damage foraging habitat such as kelp beds, or physically displace Resident Killer Whales from areas they have historically travelled in. If the finfish aquaculture industry continues to expand on the north coast, the placement of net pens may become an issue for Northern Residents.

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4.2.4. Oil spills

While the probability of either Northern or Southern Resident Killer Whales being exposed to a major oil spill is relatively low, the impact of such an event is potentially catastrophic. Both populations are at risk of exposure to an oil spill because of the large volume of tanker traffic that travels in and out of Puget Sound and the Strait of Georgia (Baird 2001; Grant and Ross 2002) and the proposed expansion of tanker traffic along the coast of BC. In 2003, 746 tankers and barges transported over 55 billion litres of oil and fuel through the Puget Sound (WDOE 2004). Though the moratorium on offshore oil and gas exploration and development remains in place in BC, if the moratorium is lifted, the extraction and transport of oil may put Resident Killer Whales at additional risk.

Killer Whales do not appear to avoid oil, as evidenced by the 1989 Exxon Valdez oil spill in Prince William Sound, Alaska. Less than a week after the spill, Resident Killer Whales from one pod were observed surfacing directly in the slick (Matkin et al. 1999). Seven whales from the pod were missing at this time, and within a year, 13 of them were dead. This rate of mortality was unprecedented, and there was strong spatial and temporal correlation between the spill and the deaths (Dahlheim and Matkin 1994; Matkin et al. 1999). The whales probably died from the inhalation of petroleum vapours (Matkin et al. 1999). Exposure to hydrocarbons can be through inhalation or ingestion and has been reported to cause behavioural changes, inflammation of mucous membranes, lung congestion, pneumonia, liver disorders, and neurological damage (Geraci and St. Aubin 1982).

4.2.5. Incidental mortality in fisheries

Killer Whales are rarely entangled in fishing gear, based on anecdotal accounts and an absence of net marks in identification photographs, but the actual numbers of whales caught are unknown (Baird 2001). Several stranded Killer Whales have been found with gear from commercial or recreational line fisheries in their stomachs and the possibility of mortality as a result is unknown (Ford et al. 1998). A few entanglements have been reported from BC, Alaska and California, but they usually have not resulted in death (Pike and MacAskie 1969; Barlow et al. 1994; Heyning et al. 1994; Guenther et al. 1995). In 2014, Northern Resident Killer Whale I103 became severely entangled in a gill net and despite being released quickly, died the following winter. It is likely that entanglement in fishing gear poses little direct threat to Killer Whale populations at present. However, there are areas in BC where Killer Whales have learned to take fish from fishing gear and once this behaviour is adopted, it can spread quickly throughout a population. This problem, referred to as depredation, is severe in many parts of the world (Donogue et al. 2002). Where depredation occurs, deterrent methods, entanglement and accidental hooking can increase the injury or mortality rates of whales.

5. Knowledge gaps

While Resident Killer Whales are among the best studied cetaceans in the world, significant gaps in knowledge about these populations remain. In part this is due to the fact that although studies of Killer Whales have been ongoing over the last 45 years, their whereabouts are poorly known during much of the year. As well, opportunities to learn from Killer Whale carcasses occur relatively infrequently. Only seven to eight carcasses are recovered around the world each year (Raverty et al. 2014). In a 30-year period, only 14 Resident carcasses were found and necropsied in BC (Ford et al. 1998), a recovery rate of 6%.

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Some key areas where further knowledge is needed include:

- the year-round distribution and behaviour of Resident Killer Whales
- whether potential additional critical habitat areas are required for Resident Killer Whales
- the historical abundance of Resident Killer Whales
- the year-round diet and energetic requirements of Resident Killer Whales
- the consequences of changes in key prey populations on Resident Killer Whales, as well as their historic trends
- the population level consequences of low population size and its effects on the sustainability and viability of Resident Killer Whales
- the population size that is needed to maintain the cultural and genetic diversity of Resident Killer Whales
- the long- and short-term effects of physical disturbance (shipping, whale watching, aircraft, researchers and film makers) on Resident Killer Whales
- the long- and short-term effects of acoustic disturbance (whale watching, seismic surveys, military sonar, researchers and film makers) on Resident Killer Whales
- the full range of anthropogenic environmental contaminants to which Killer Whales and their prey are exposed, over time and in space, with special attention paid to the identification of sources and the resulting effects of environmental contaminants on Resident Killer Whales, their prey and their habitat
- diseases, pathogens, parasites and pathologies of Resident Killer Whales
- the effects of climate or environmental change on Resident Killer Whale prey and their habitat

6. Recovery

6.1 Recovery goal

The recovery goal for Northern and Southern Resident Killer Whales is to: ensure the long-term viability of Resident Killer Whale populations by achieving and maintaining demographic conditions that preserve their reproductive potential, genetic variation, and cultural continuity.

The recovery goal reflects, to the extent possible, the complex social and mating behaviour of Resident Killer Whales and the key threats that may be responsible for their decline. In the absence of historical data, it does not identify a numerical target for recovery because our current understanding of Killer Whale population demographics is not adequate for setting a meaningful value at this time. However, because maintaining the demographic conditions that will preserve their reproductive potential, genetic variation, and cultural continuity is fundamental to these populations recovering, a number of demographic indicators are expressed herein that will serve as short-term measures of recovery success. The setting of a quantitative recovery goal will be revisited as new information becomes available.

Killer Whales are top-level predators, and as such will always be far less abundant than most other species in their environment. In addition, they are segregated into small populations that are closed to immigration and emigration, such as the Northern and Southern Resident communities. Furthermore, their capacity for population growth is limited by a suite of life history and social factors, including late onset of sexual maturity, small numbers of reproductive females and mature males, long calving intervals, and dependence on the cultural transmission of ecological and social information. Unfortunately, little is known concerning the historic sizes of

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Killer Whale populations, or the factors that ultimately regulate them. Genetic diversity is known to be low in both populations, particularly the Southern Residents, but the consequences of this lack of diversity have not been examined.

6.1.1. Measures of recovery success

The following have been identified as measures of recovery success:

a) long-term maintenance of a steady or increasing size for populations currently at known historic maximum levels and an increasing size for populations currently below known historic maximum levels
b) maintenance of sufficient numbers of females in the population to ensure that their combined reproductive potential is at replacement levels for populations at known historic maximum levels and above replacement levels for populations below known historic maximum levels
c) maintenance of sufficient numbers of males in the population to ensure that breeding females have access to multiple potential mates outside of their own and closely related matrilines
d) maintenance of matrilines comprised of multiple generations to ensure continuity in the transmission of cultural information affecting survival

6.1.2. Monitoring and research strategies

The following monitoring and research programs are essential to define and evaluate the success of the indicators of recovery and will be vital to the establishment of a quantitative recovery goal:

a) routinely monitor Resident Killer Whale population numbers, sex and age composition, social structure and genetic diversity
b) develop models of Resident Killer Whale population dynamics and demographics, including social and genetic structure
c) develop a quantitative framework to better understand how key anthropogenic and naturally occurring factors, particularly those identified as threats, affect the dynamics of Resident Killer Whale populations
d) undertake studies to identify the role of cultural transmission in the foraging ecology, sociobiology and maintenance of genetic diversity in Resident Killer Whales

Because Killer Whale populations are closed to immigration and emigration, and animals individually identifiable, routine monitoring provides accurate, detailed life history information, which is used to determine trends, and to refine and test population models. These models will lead to a better understanding of achievable targets for population recovery. A better understanding of the anthropogenic and naturally occurring factors that regulate or limit Killer Whale populations, and of the role and importance of culture, will make it possible to rank threat factors and prioritize recovery actions.

6.2 Recovery objectives and strategies to achieve recovery

Given our current knowledge, the primary anthropogenic threats to the long-term survival of Northern and Southern Resident Killer Whales appear to be 1) reduced prey availability, 2) environmental contaminants, 3) disturbance, and 4) degradation of critical habitat. We have

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identified four objectives that directly address these threats and contribute to achieving the recovery goal of population viability and sustaining genetic diversity and maintaining cultural continuity (as stated above). The numerical values do not reflect any priority among the objectives. These objectives provide direction for the broad strategies that can be used to specifically mitigate and/or eliminate each of the threats facing Resident Killer Whales, and to better address gaps in our knowledge.

6.2.1 Objective 1

> Ensure that Resident Killer Whales have an adequate and accessible food supply to allow recovery.

This objective identifies the need to learn more about the year-round diet of Killer Whales, and to understand and mitigate the threats to key prey populations and their habitat. Food supply can limit the growth and recovery of any population, and there are concerns about the quality and quantity of Resident Killer Whale prey, as well as the prey's habitat. In some areas of the U.S., for example, runs of Chinook Salmon, a principal prey species for Resident Killer Whales, have been listed as either Endangered or Threatened (NOAA 2017). We know very little about what Killer Whales eat during the winter and spring, and this information is critical to understanding whether the quantity or quality of their food supply could be responsible for the recent decline in Killer Whale numbers, and may prevent their populations from recovering.

Objective 1 strategies

- Determine the seasonal and annual diet and energetic requirements of Resident Killer Whales
- Identify key prey populations and feeding areas for Resident Killer Whales
- Establish long-term monitoring programs capable of detecting changes in the abundance, distribution and quality of Resident Killer Whale prey
- Protect the access of Resident Killer Whales to important feeding areas
- Ensure that Resident Killer Whale prey populations and their (the prey's) habitat are adequately protected from anthropogenic factors such as exploitation and degradation, including contamination, which will allow for the recovery of Resident Killer Whales

6.2.2 Objective 2

> Ensure that chemical and biological pollutants do not prevent the recovery of Resident Killer Whale populations.

Ross et al. (2000) showed that Southern Resident Killer Whales are among the most contaminated mammals known, and that Northern Residents also carry significant pollutant loads. These pollutants are known to impair both immune responses and reproduction in other species at lower concentrations than currently seen in Killer Whales. The strategies listed below are intended to improve our understanding of, and mitigate, the contaminant risks that Resident Killer Whales and their prey are exposed to. They also acknowledge the serious risks that pathogens, introduced species and catastrophic events such as oil spills present to Killer Whales and their prey.

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Objective 2 strategies

- Investigate the effects of chemical and biological pollutants on the health and reproductive capacity of Resident Killer Whales
- Monitor chemical and biological pollutant levels in Resident Killer Whales and their prey
- Identify (and prioritize) key chemical and biological contaminants and their sources
- Reduce the introduction into the environment of pesticides and other chemical compounds that have the potential to adversely affect the health of Killer Whales and/or their prey, through measures such as national and international agreements, education, regulation, and enforcement
- Mitigate the impacts of currently and historically used 'legacy' pollutants in the environment
- Investigate diseases, pathogens, parasites, and pathologies of Killer Whales
- Reduce the introduction of biological pollutants, including pathogens and exotic species, into the habitats of Killer Whales and their prey

In order for these strategies to be successful, it is important that contaminant levels be measured, so as to provide a baseline that can be used to monitor changes in contaminant profiles over time, and to quantify whether attempts at mitigation are successful. Mitigation must occur on scales that range from the local consumer to the international level, as many pollutants originate from sources outside of Canada. Regulations, guidelines and best practices for the manufacture, storage, transport, use and disposal of hazardous compounds must be followed, and evolve to reflect changing knowledge of contaminants and their adverse health effects on Resident Killer Whales, their prey and their habitat. Education at individual, corporate and government levels (again ranging from local to international) will play an important role in reducing the rate at which contaminants are introduced into the environment. International treaties, similar to the Stockholm Convention on Persistent Organic Pollutants, should be endorsed.

6.2.3 Objective 3

> Ensure that disturbance from human activities does not prevent the recovery of Resident Killer Whales.

Both physical and acoustic disturbance from human activities may be key factors causing depletion or preventing recovery of Resident Killer Whale populations. Sources of acoustic disturbance range from high-intensity sound produced by seismic surveys to chronic sources such as vessel traffic. During periods of high boating activity in the summer months, disturbance may occur from vessel congestion, impairing the ability of whales to move freely and/ or forage effectively. Physical disturbance can be caused by boat or air traffic close to whales, especially during certain behavioural states such as feeding or beach rubbing (Williams 1999). Research to date has identified various immediate responses of whales to disturbance; however, we know little about potential long-term effects on whale behaviour, health, and foraging efficiency. The National Research Council (NRC 2005) put forward a detailed listing of approaches to better understand how noise impacts marine mammals. The strategies listed here generally address the need for more knowledge about how noise and physical disturbance affect Resident Killer Whales and also provide for mitigation of disturbance as a precautionary measure.

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Objective 3 strategies

- Determine the short and long-term effects of chronic and immediate forms of disturbance, including vessels and noise, on the physiology, foraging, and social behaviour of Resident Killer Whales
- Determine baseline ambient and anthropogenic noise profiles and monitor sources and changes in the exposure of Resident Killer Whales to underwater noise
- Develop and implement regulations, guidelines, sanctuaries and other measures to reduce or eliminate physical and acoustic disturbance of Resident Killer Whales
- Develop protocols, regulations, guidelines and/or other measures for the use of underwater seismic survey tools and high energy sonar testing, as most appropriate and in collaboration with stakeholders, to reduce disturbance or injury to Resident Killer Whales, where such activities are permitted

In order to be effective, these strategies will require education and stewardship activities promoting compliance with best practice guidelines, the protection of sanctuaries, and the enforcement of regulations. New technologies, such as those that reduce noise may also contribute to reductions in disturbance over the long-term. Existing regulations, guidelines, protocols and other measures should be evaluated for their efficacy in protecting Resident Killer Whales, particularly as new information becomes available.

6.2.4 Objective 4

Protect critical habitat for Resident Killer Whales and identify additional potential areas for critical habitat designation and protection.

Four areas, used consistently by Resident Killer Whales, are designated as critical habitat as defined by SARA. One, the trans-boundary waters of Haro Strait and Boundary Pass, is used by Southern Residents year-round. The second, the waters of Johnstone and southeastern Queen Charlotte Straits and their adjoining channels, is used by many of the Northern Residents during the summer and fall. The third, which includes waters off southwestern Vancouver Island, is used by members of both the Southern and Northern Resident Killer Whale populations throughout most of the year. The fourth, waters in western Dixon Entrance, is used by Northern Resident Killer Whales year-round. These areas represent a relatively small proportion of the total range of each population and it is unknown whether additional critical habitat may be required to support Resident Killer Whale recovery objectives. Preliminary data suggest that key areas may exist in other locations and at different times of the year, but are not sufficient to warrant proposing these habitats as critical without further research. The strategies listed here provide measures for the protection of the critical habitats referred to above, as well as direction for the potential identification of additional critical habitat.

Objective 4 strategies

- Develop a year-round comprehensive survey program for Resident Killer Whales
- Identify key feeding areas and other critical habitat of Resident Killer Whales throughout the year
- Protect the access of Resident Killer Whales to their critical habitat
- Protect critical habitat areas through assessment and mitigation of human activities that result in contamination and physical disturbance

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- Ensure that sufficient prey is available to Killer Whales in their critical habitat.
- Ensure trans-boundary cooperation in the identification and protection of critical habitat

The first two strategies listed above focus on determining whether additional areas should be proposed for critical habitat designation. The remaining strategies, as well as those in Objectives 1, 2 and 3, will help to preserve and protect designated critical habitat.

6.3 Effects on non-target species

The objectives outlined above are designed to protect Resident Killer Whale prey populations and their habitat from exploitation and degradation including contaminants and noise. The spin-off effects of this are likely to be widespread and will be beneficial to human health as well as to a wide variety of organisms ranging from fish to sea birds, since all are affected by contaminants and exploitation. It is likely this benefit will far exceed the increased mortality of prey species associated with increased Killer Whale numbers.

6.4 Evaluation and the status of strategies for recovery

The following are examples of performance measures that may be used to assess the effectiveness of the objectives and strategies, and to determine whether recovery remains feasible. Detailed recovery measures that provide the best chance of meeting the recovery goal and objectives for Northern and Southern Resident Killer Whales, and timelines for their implementation, were identified during the development of the action plan (DFO 2017a).

Progress towards meeting these objectives and strategies was detailed in the Report on the Progress of Recovery Strategy Implementation for Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada for the Period 2009-2014 (DFO 2016b) and will continue to be reported on every five years until the objectives have been achieved or until recovery of the species is no longer feasible.

Table 3. Examples of performance measures that may be used to assess the effectiveness of the broad strategies used to achieve the objectives of the recovery strategy for the Northern and Southern Resident Killer Whales in Canada

Objective no. /threat	Broad strategy	Status*	Examples of performance measures for broad strategies and objectives
Recovery Goal: Ensure long-term population viability	Monitor population dynamics and demography	Underway	Completion of annual censuses
			Genetic sampling and analyses completed
			Evaluation of population status to ensure growth
	Develop population models	Underway	Models developed that incorporate social and genetic structure and explain population trends
	Quantitative framework for understanding effects of threats on population dynamics	Proposed	Models completed that incorporate threats into population dynamic models

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Objective no. /threat	Broad strategy	Status*	Examples of performance measures for broad strategies and objectives
	Studies to identify role of culture in foraging ecology and sociobiology	Proposed	Peer-reviewed publications on role of culture in Killer Whale foraging
	Studies to identify role of culture in maintaining genetic diversity	Underway	Biopsy samples collected and analyzed to identify paternity
1. Ensure adequate and accessible food supply	Determine seasonal/annual diet/ energetic requirements	Underway	Prey fragment samples collected year-round for multiple years
			Alternative diet sampling methods tested to confirm diet
			Winter and spring distribution and diet of Resident Killer Whales identified
	Identify key prey populations and feeding areas	Underway	Complete diet sampling of all members of population and during all seasons
			Prey identified to stock, not just species
	Monitoring prey populations to detect changes in abundance or availability	Underway	Population assessment completed for all stocks identified as important prey for Resident Killer Whales
	Protect access to important feeding areas	Proposed	Guidelines developed for human activities in important whale feeding areas
	Protection of prey populations	Underway	Incorporation of Killer Whale predation into fisheries management plans
2. Chemical and biological contaminants	Investigate effects of contaminants on health and reproductive capacity of Killer Whales	Underway	Peer reviewed publication on contaminants in Resident Killer Whales
			Develop and apply tests to measure the health of Killer Whales
	Monitor pollutants, diseases, pathogens, parasites and pathologies in Killer Whales	Underway	Extensive sampling of populations to establish baseline contaminant levels
			Completed analyses of contaminants in samples
			Complete necropsies of stranded Killer Whales.
	Identify and prioritize key chemical and biological pollutants	Underway	Completed sampling and analyses of contaminants in Killer Whale prey
	Identify and prioritize key sources of chemical and biological pollutants	Underway	Water quality sampling in areas throughout range of Resident Killer Whales
	Reduce introduction of chemical pollutants into environment	Underway	Measurable decline in contaminant levels in environment (prey, sediments etc.)
	Mitigate impacts of currently used pollutants	Underway	Evaluation of effectiveness of legislation completed

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Objective no. /threat	Broad strategy	Status*	Examples of performance measures for broad strategies and objectives
	Mitigate impacts of 'legacy' pollutants	Underway	PCB sources identified
	Reduce introduction of biological pollutants	Underway	Evaluation of effectiveness of legislation completed
3. Acoustical and Physical Disturbance	Investigate short-term effects of chronic forms of disturbance	Underway	Controlled studies of whale/boat interactions completed
	Investigate short-term effects of acute forms of disturbance	Proposed	Complete controlled study of marine mammals in areas where seismic exploration is active
	Investigate long-term effects of chronic forms of disturbance	Proposed	Complete model that incorporates effects of increasing ambient noise levels on communication signals of Resident Killer Whales
	Investigate long-term effects of acute forms of disturbance	Proposed	Complete controlled study of marine mammals in areas where seismic exploration is active
	Determine baseline ambient and anthropogenic noise profiles	Proposed	Complete acoustic profiles of vessels most likely to be encountered by Resident Killer Whales
	Develop measures to reduce physical disturbance	Underway	Revised whale watching guidelines, and/ or regulations that reflect most recent understanding of effects of chronic physical disturbance
	Develop measures to reduce acoustic disturbance	Proposed	Establishment of acoustic sanctuaries in critical habitat areas
	Develop measures for reducing disturbance to high energy sources of sound	Proposed	Revised protocols for seismic and military sonar that reflect most recent understanding of physiological and behavioural responses to noise
4. Protection of critical habitat	Year-round comprehensive surveys to identify important areas for Killer Whales	Underway	Winter distribution of Resident Killer Whales well understood
	Identify key feeding areas and other critical habitat	Underway	Winter prey of Resident Killer Whales identified
	Protect access of whales to critical habitat	Underway	Sanctuaries within critical habitat established
	Protect critical habitat from contamination, and physical disturbance	Proposed	Measurable reduction in contaminants in critical habitat
	Ensure sufficient prey available to whales in critical habitat	Proposed	Key prey populations in critical habitat areas
	Ensure trans-boundary cooperation in identification and protection of critical habitat	Proposed	Formal identification of critical habitat recognized by international agreement

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Note: A thorough listing of recovery measures was included in the action plan (DFO 2017a).

* The information presented in the status column of this table represents the status of each strategy at the time of the development of the original recovery strategy (2008). See Table 3 in the Report on the Progress of Recovery Strategy Implementation for Northern and Southern Resident Killer Whales (DFO 2016b) for more recent information regarding progress made toward each of these objectives and strategies.

7. Critical habitat

7.1 Identification of the species' critical habitat

7.1.1 General description of the species' critical habitat

Critical habitat is defined in SARA section 2(1) as "...the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in a recovery strategy or in an action plan for the species."

SARA defines habitat for aquatic species at risk as "... spawning grounds and nursery, rearing, food supply, migration and any other areas on which aquatic species depend directly or indirectly in order to carry out their life processes, or areas where aquatic species formerly occurred and have the potential to be reintroduced" [s. 2(1)].

Partial critical habitat was identified for both Northern and Southern Resident Killer Whales in the 2008 recovery strategy. Northern Resident Killer Whale critical habitat included the waters of Johnstone Strait and southeastern Queen Charlotte Strait (Figure 4), while Southern Resident Killer Whale critical habitat included the transboundary waters in southern BC, including the southern Strait of Georgia, Haro Strait, and Juan de Fuca Strait (Figure 5). These critical habitat areas were protected through the making of a SARA Critical Habitat Order in 2009. In 2011, minor amendments were made to the critical habitat section of the 2008 recovery strategy. These amendments clarified that attributes of critical habitat identified in the 2008 recovery strategy are a part of critical habitat.

Two additional areas were identified for consideration as critical habitat for Resident Killer Whales in DFO (2017b).These areas include: i) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (Northern and Southern Resident Killer Whale critical habitat, Figures 4 and 5) and ii) the waters of western Dixon Entrance along the north coast of Graham Island from Langara Island to Rose Spit (Northern Resident Killer Whale critical habitat, Figure 4).

For Northern and Southern Resident Killer Whales, critical habitat is identified in this recovery strategy to the extent possible, using the best available information. A description of the functions, features, and attributes that support the identification of critical habitat is provided in section 7.1.3.

Under SARA, critical habitat must be legally protected within 180 days of being identified in a recovery strategy or action plan through a SARA Critical Habitat Order or under any other Act of Parliament, and through prohibitions to the destruction of any part of critical habitat.

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This recovery strategy identifies critical habitat for Resident Killer Whales as four distinct geographic areas. These include: 1) the waters of Johnstone Strait and southeastern Queen Charlotte Strait (Northern Resident Killer Whale critical habitat); 2) transboundary waters in southern British Columbia, including the southern Strait of Georgia, Haro Strait, and Juan de Fuca Strait (Southern Resident Killer Whale critical habitat); 3) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (Northern and Southern Resident Killer Whale critical habitat); and 4) waters of west Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit (Northern Resident Killer Whale critical habitat).

It is unknown if the critical habitat identified in this recovery strategy is sufficient to achieve the species' recovery goal and objectives. The schedule of studies outlines the research required to identify additional critical habitat and to acquire more detail about the critical habitat identified to achieve the species' recovery goal and objectives. Additional critical habitat may be identified in future amendments to this recovery strategy.

7.1.2 Information and methods used to identify critical habitat

The movement patterns of Resident Killer Whales are influenced by the availability of their preferred prey. During the summer and fall months, Resident Killer Whale distribution is associated spatially and temporally with the migratory routes of Chinook Salmon as this important prey species returns to natal streams to spawn (Ford and Ellis 2005). For the rest of the year there is less information available on the diet, distribution, and movement patterns of Resident Killer Whales, though surveys, passive acoustic monitoring, and satellite tagging studies have been conducted to address these knowledge gaps (Riera 2012; Hanson et al. 2013; DFO 2017b). Determining whether there are additional habitats that the whales utilize during winter and spring that are critical for the survival or recovery of these populations has been and continues to be a priority. This will need to take into account the likelihood that changes in the availability of major stocks of key prey species may cause corresponding shifts in the geographic location of critical habitat for Resident Killer Whales.

Methods and rationale used to designate each of the four critical habitat areas identified to date are detailed below.

Northern Resident Killer Whale critical habitat: Johnstone Strait and southeastern Queen Charlotte Strait

Analyses of existing data on coast-wide occurrence patterns of Northern Resident Killer Whales provide quantitative documentation of the importance of Johnstone Strait and southeastern Queen Charlotte Strait (Figure 4) to these whales (Ford 2006). These analyses, along with previously published information, form the basis for this area's critical habitat designation.

One or more Northern Resident matrilines are sighted in this area on most days during July through October, with peak numbers generally in mid-July to mid-September (Nichol and Shackleton 1996; Ford 2006). Sightings become more sporadic in the area during November, are scarce from December through May. Although all Northern Resident pods have been identified in the area, different pods do not use the area equally (Ford et al. 2017). For example, 75% of encounters documented during 1990-2004 included all or part of A1 pod, while only 0.7% of encounters during this same period included I18 pod, a group of similar size. Northern Resident Killer Whales in the Johnstone Strait area spend the majority of time foraging for

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salmon, primarily Chinook during July-September and Chum in October (Ford 1989; Ford et al. 1998; Ford 2006; Ford et al. 2010; DFO 2017b). Other activities undertaken in the area include resting, socializing, and beach rubbing (Ford 1989; Ford et al. 2000; Ford 2006).

Beach rubbing appears to be an important activity for Northern Resident Killer Whales. More than 90% of the Northern Resident Killer Whales observed in Johnstone Strait visit the rubbing beaches, and spend about 10% of their time there (Briggs 1991). During this time they are very sensitive to disturbance. In recognition of the importance of this habitat to Resident Killer Whales, in 1982 the Province of British Columbia established the Robson Bight–Michael Bigg Ecological Reserve to protect a portion of western Johnstone Strait and the foreshore near Robson Bight, where the rubbing beaches are located. This Ecological Reserve includes the primary foraging areas for Killer Whales utilizing the Johnstone Strait area, as well as at least six beaches used to various degrees by these whales for rubbing, and is included as critical habitat within the Johnstone and southeastern Queen Charlotte Straits boundaries (see Table 4).

Given the importance of this area to a significant component of the Northern Resident community for a major portion of the salmon feeding season, and the traditional use of rubbing beaches located there, this area has been designated as critical habitat as defined in SARA.

Southern Resident Killer Whale critical habitat: transboundary waters of the southern Strait of Georgia, Haro Strait, and Juan de Fuca Strait

The transboundary waters of southern BC and Washington State (Figure 5) represent an important area of high concentration of Southern Resident Killer Whales. This area includes waters under both Canadian and U.S. jurisdiction. Analyses of existing data on coast-wide occurrence patterns of Southern Resident Killer Whales have been completed by NOAA as part of the ESA designation of critical habitat in collaboration with DFO (NMFS 2006a). This assessment provided quantitative documentation of the importance of these transboundary areas to these whales and forms, along with previously published information, the basis for the critical habitat identification.

This critical habitat area is utilized regularly by all three Southern Resident pods during June through October in most years (Osborne 1999; Wiles 2004). J pod appears to be present in the area throughout much of the remainder of the year, but two Southern Resident pods, K and L, are typically absent during December through April. This critical habitat is of great importance to the entire Southern Resident community as a foraging range during the period of salmon migration, and thus has been designated as critical habitat under SARA.

Northern and Southern Resident Killer Whale critical habitat: southwestern Vancouver Island; and Northern Resident Killer Whale critical habitat: western Dixon Entrance

Southwestern Vancouver Island and western Dixon Entrance were identified as habitats of special importance to Northern and Southern Resident Killer Whales based on photo-identification, predation, and acoustic data. Passive acoustic monitoring was used to supplement the boat-based photo-identification studies, as these areas are remote and exposed to open ocean conditions, making small boat studies difficult. Using both photo-identification and detections of Resident Killer Whale vocalizations on acoustic recording devices allowed for year-round assessment of Resident Killer Whale occurrence in these areas. Tissue samples and scales were collected at predation sites to identify prey and assess Resident Killer Whale

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diet. See DFO (2017b) for detailed information about the methods used to identify these two areas as Resident Killer Whale critical habitat.

Critical habitat off southwestern Vancouver Island (Figures 4 and 5) includes the Canadian portions of Swiftsure Bank, where acoustic monitoring between August 2009 and July 2011 indicated considerable habitat use by both Southern and Northern Resident Killer Whales over much of the year. Additionally, it encompasses several other relatively shallow banks, including La Pérouse Bank which, like Swiftsure Bank, is among the most productive fishing areas for Chinook Salmon on the west coast of North America. During this acoustic monitoring, all three Southern Resident Killer Whale pods were detected in this area, with L pod being the most frequently documented (Ford et al. 2017). The area is important for Southern Resident Killer Whales, both during summer, when groups of whales spend time west of the critical habitat area in the transboundary waters in southern BC, and in winter, when whales are mostly absent from the southern BC critical habitat area, but were detected frequently off southwestern Vancouver Island (DFO 2017b). Northern Resident Killer Whales were detected in all months of the year, especially in March and April. Fifteen of the 16 pods in the Northern Resident Killer Whale population were also encountered during boat surveys in this area. Given the importance of southwestern Vancouver Island to both Northern and Southern Resident Killer Whales throughout most of the year, it meets the definition for critical habitat under SARA for both of these populations.

Critical habitat in western Dixon Entrance (Figure 4) is an important foraging area for Northern Resident Killer Whales, and is situated on migratory routes for a wide variety of Chinook Salmon stocks. Northern Resident Killer Whales were detected during acoustic monitoring activities between September 2009 and June 2012 in this area in all months of the year, but most frequently during late winter and spring (DFO 2017b). Certain pods that are rarely encountered in Northern Resident Killer Whale critical habitat in Johnstone and eastern Queen Charlotte Straits at any time of year were frequently detected in western Dixon Entrance (DFO 2017b). As habitat needed for recovery, western Dixon Entrance appears to be far more relevant for these pods than the Johnstone /Queen Charlotte Straits critical habitat area. Pods belonging to G clan were documented in western Dixon Entrance most often, followed by R01 pod (R clan). The use of western Dixon Entrance by members of the population that are rarely documented in the Johnstone Strait area and during times of year when detections of this population in the Johnstone Strait area are infrequent indicates its importance to Northern Resident Killer Whales. This area thus meets the definition for critical habitat under SARA.

7.1.3 Identification of critical habitat

Geographic information

Four critical habitat areas have been identified for Resident Killer Whales, described in section 7.1.1. Critical habitat was geographically delineated and is identified as the areas within the identified geographical boundaries (Appendix D), given that they contain the described biophysical features, attributes, and the functions they support. The critical habitat's biophysical functions, features, and attributes are described below and summarized in Table 4, and need to be protected against destruction.

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Northern Resident Killer Whale critical habitat: Johnstone Strait and southeastern Queen Charlotte Strait

The boundaries of the existing critical habitat area for Northern Resident Killer Whales include the waters of Johnstone Strait and southeastern Queen Charlotte Strait, and the channels connecting these straits as depicted in Figure 4. This area is approximately 905 km^2.

Southern Resident Killer Whale critical habitat: Transboundary waters of the southern Strait of Georgia, Haro Strait, and Juan de Fuca Strait

Critical habitat for Southern Resident Killer Whales includes the transboundary areas of southern BC and Washington State. The portion of this critical habitat that is in Canadian waters is approximately 3,390 km^2 in size, and includes the Canadian side of Haro and Juan de Fuca Straits, as well as Boundary Pass and adjoining areas in the Strait of Georgia, as depicted in Figure 5.

Much of the area that qualifies as critical habitat for Southern Resident Killer Whales falls within U.S. jurisdiction, and the identification of critical habitat under SARA only applies to the portion of the area that is within Canadian waters (Figure 5). In November 2005, the U.S. listed Southern Resident Killer Whales as Endangered under the ESA (NMFS 2006a). As a result, 6,630 km^2 of U.S. inland waters of Washington State and Juan de Fuca Strait were designated as critical habitat under the ESA in November 2006 (NMFS 2006b, see Figure 5).

Northern and Southern Resident Killer Whale critical habitat: Southwestern Vancouver Island

Critical habitat for Northern and Southern Resident Killer Whales located off southwestern Vancouver Island forms a contiguous westward extension of the critical habitat area for Southern Resident Killer Whales described above. The southern boundary is formed by the Exclusive Economic Zone of Canada and extends to the 200 m isobath, or depth contour. See Figures 4 and 5 for the boundaries of this critical habitat, which encompass an area of 5,025 km^2.

Northern Resident Killer Whale critical habitat: Western Dixon Entrance

Critical habitat for Northern Resident Killer Whales in western Dixon Entrance includes most of the coastal waters off the north side of Graham Island. The shallow waters of Naden Harbour, Massett Inlet, and McIntyre Bay are not included as critical habitat, due to limited use of these areas by Resident Killer Whales. See Figure 4 for the boundaries of this critical habitat, which encompass an area of 1,394 km^2.

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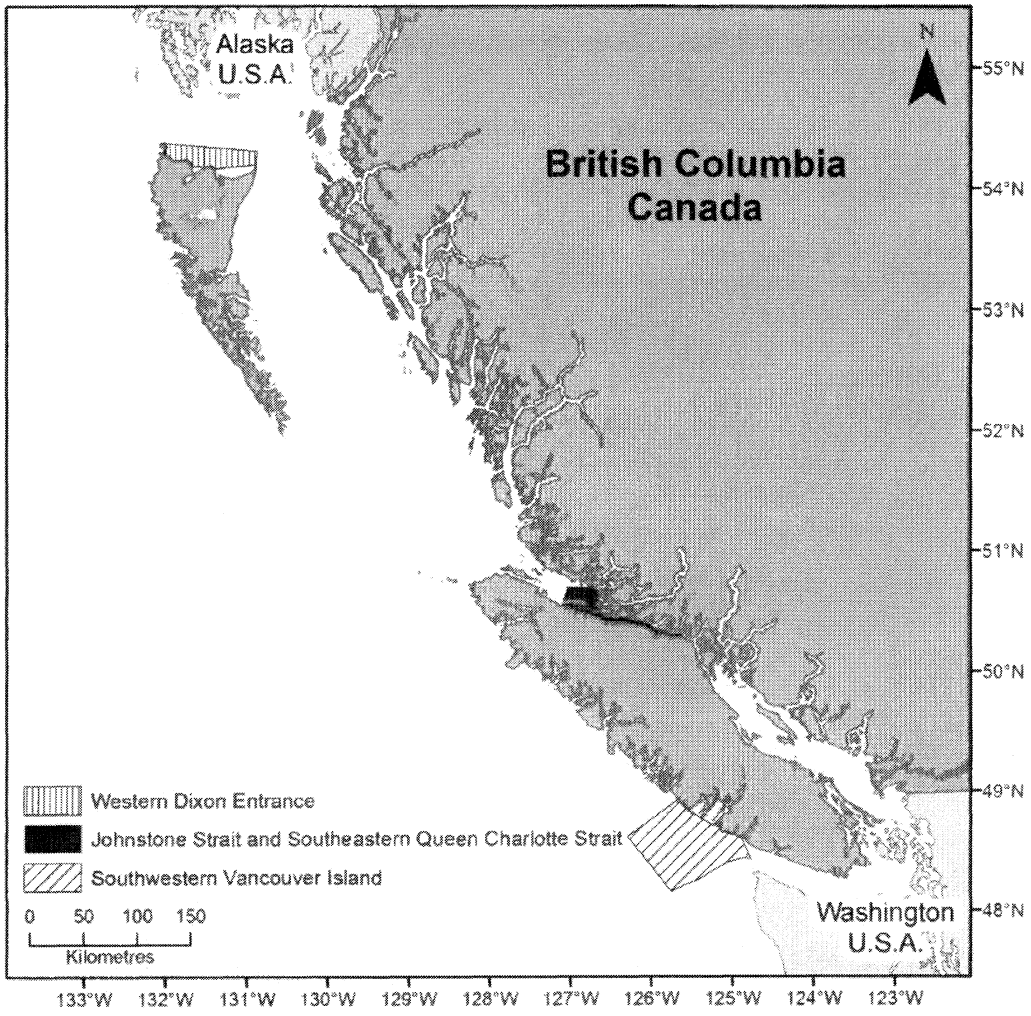

Figure 4. Critical habitat areas identified for Northern Resident Killer Whales. Critical habitat is identified as the areas within the identified geographic boundaries, given that they contain the described biophysical features, attributes and the functions they support, as described in Table 4.

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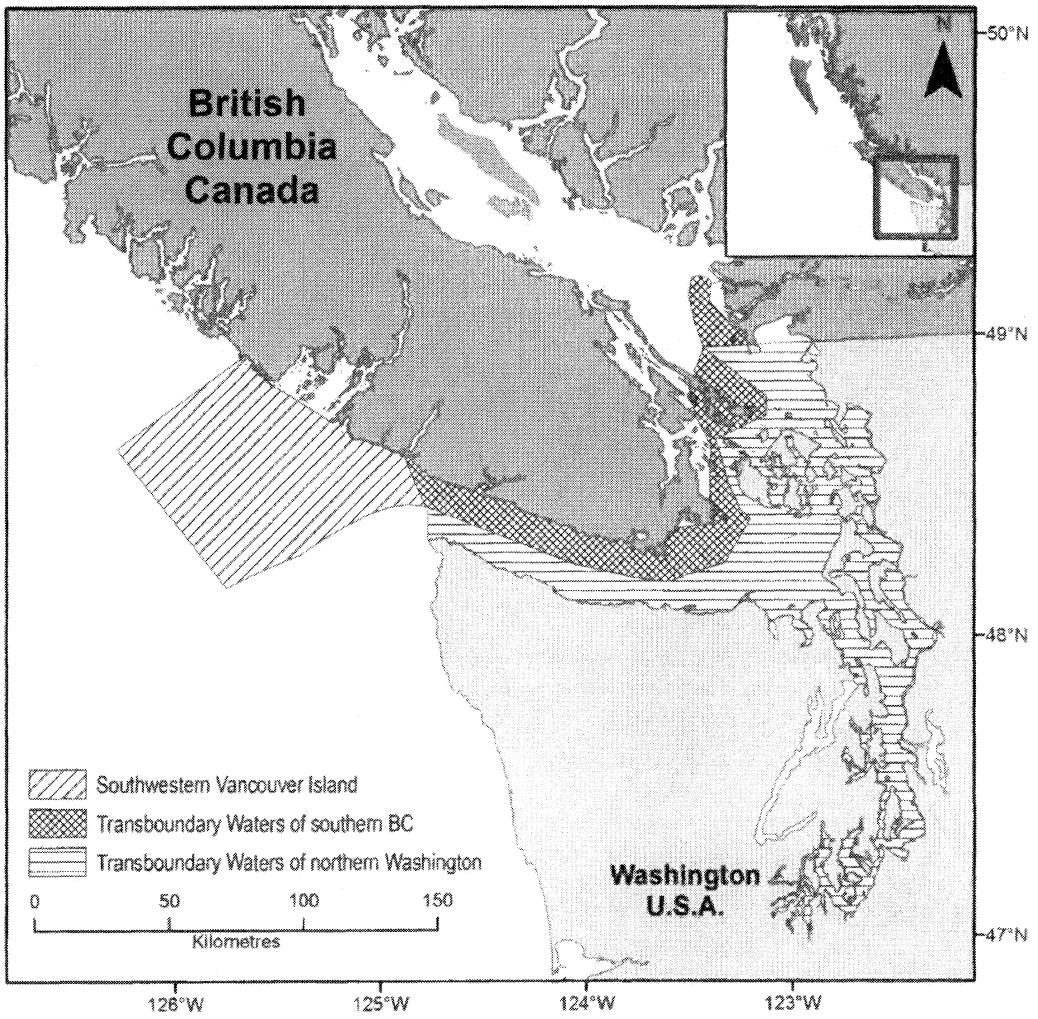

Figure 5. Critical habitat areas identified for Southern Resident Killer Whales. Critical habitat is identified as the areas within the identified geographic boundaries, given that they contain the described biophysical features, attributes and the functions they support, as described in Table 4. The hatched areas in the transboundary waters of southern BC and off southwestern Vancouver Island are the critical habitat areas in Canadian waters for Southern Resident Killer Whales, as designated under SARA. The hatched area in the transboundary waters of northern Washington State is designated as Southern Resident Killer Whale critical habitat under the U.S. ESA.

Biophysical functions, features, and attributes

Seasonal distribution and movement patterns of Resident Killer Whales in Canadian Pacific waters are strongly associated with the availability of their preferred prey, Chinook Salmon, and secondarily Chum Salmon (Ford 2006; Ford and Ellis 2006; Ford et al. 2010; Hanson et al. 2010). Habitats that are important for the survival or recovery of Resident Killer Whales are those that provide for profitable foraging on these key prey species, including the acoustic and

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physical space required to successfully pursue and capture prey. Other activities, including resting and socializing, similarly depend on an acoustic environment that does not impede effective communication among whales.

The only activity that is strictly associated with particular geographic locations is beach rubbing by Northern Resident Killer Whales, which only takes place at specific traditional sites. Several of these sites are included in the Northern Resident Killer Whale critical habitat located in Johnstone Strait (Ford 2006). These rubbing beaches are composed of small rounded pebbles approximately 1 – 5 cm in diameter and are usually situated along otherwise rocky shorelines (Ford pers. comm. 2018).

Table 4 summarizes the best available knowledge of the biophysical functions, features, and attributes for Northern and Southern Resident Killer Whales. Note that not all attributes in Table 4 must be present in order for a feature to be identified as critical habitat. If a feature as described in Table 4 is present and capable of supporting the associated functions, the feature is considered critical habitat for the species.

The features, functions, and attributes described in Table 4 are based on narrative provided in the 2011 recovery strategy and on Table 1 of DFO (2017b). They apply to all four critical habitat areas and to both populations, with the exception of those associated with beach rubbing, a function that is known to be important for Northern Resident Killer Whales but has not been documented for Southern Residents. As Resident Killer Whales travel with their matrilines throughout their lives, the features, functions, and attributes described also apply to all life stages of Resident Killer Whales.

There is currently insufficient information with which to quantify the levels of many of the attributes listed in Table 4 required to support the features and functions of critical habitat. For example, the density, quantity, and quality of prey needed to support Resident Killer Whale populations are unknown. Additionally, although it is assumed that Chinook remains the primary prey species of Resident Killer Whales throughout the year, the vast majority of Resident Killer Whale prey samples have been collected during summer and fall, and their year-round diet is not well-understood. It is therefore possible that additional important prey species may be identified in the future. Broad studies focused on identifying additional habitats that are important to Resident Killer Whales, and to better understand threats to critical habitat are included in section 7.2. In addition, the action plan for Northern and Southern Resident Killer Whales includes several recovery measures to refine knowledge of the functions, features and attributes of critical habitat. The descriptions of the attributes in Table 4 may be refined in the future, as additional information becomes available.

Table 4. Summary of the biophysical functions, features, and attributes of critical habitat necessary for the survival or recovery of Northern and Southern Resident Killer Whales

Function	Feature	Attribute
Feeding and foraging	Availability of Chinook Salmon, Chum Salmon, and other important prey species	Sufficient quantity and quality of Chinook Salmon to provide for profitable foraging Diversity of Chinook stocks with a variety of spatial and temporal migration patterns sufficient to maintain availability

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		Sufficient quantity and quality of Chum Salmon and other species that comprise part of the Resident Killer Whale diet
Feeding and foraging Reproduction, socializing, resting Beach rubbing (Northern Resident Killer Whales)	Acoustic environment	Anthropogenic noise level that does not interfere with life functions and is sufficient for effective acoustic social signaling and echolocation to locate prey Anthropogenic noise level that does not result in loss of habitat availability or function
Feeding and foraging Reproduction, socializing, resting	Water quality	Water quality of a sufficient level to support Chinook stocks Water quality of a sufficient level to support Chum Salmon and other species that comprise part of the Resident Killer Whale diet Water quality of a sufficient level so as not to result in loss of function
Feeding and foraging Reproduction, socializing, resting	Physical space	Unimpeded physical space surrounding individual whales (minimum vessel approach distance 200m)
Beach rubbing (Northern Resident Killer Whales)	Rubbing beach	Suitable physical habitat to allow for beach rubbing behaviour

Summary of critical habitat relative to the recovery goal and objectives

Critical habitat areas identified in this recovery strategy are areas that, based on current best available information, the Minister of Fisheries and Oceans and the Minister responsible for the Parks Canada Agency consider necessary to partially achieve the recovery goal and objectives required for the survival or recovery of Northern and Southern Resident Killer Whales.

It is unknown if critical habitat identified in this recovery strategy is sufficient to achieve the species' recovery goal and objectives. The schedule of studies outlines the research required to identify additional critical habitat and to acquire more detail about the critical habitat identified to achieve the species' recovery goal and objectives. Additional critical habitat may be identified in future updates to the recovery strategy.

7.2 Schedule of studies to identify critical habitat

Further research is required to refine the understanding of the functions, features, and attributes of the currently identified critical habitat, to identify potential additional critical habitat necessary to support the species' recovery goal and objectives and to protect the critical habitat from destruction. This additional work includes the studies listed in Table 5. Refer to the report on the progress of recovery strategy implementation for the Northern and Southern Resident Killer Whales in Canada (DFO 2016b) for more details regarding the progress made and the status of the studies outlined in Table 5. In addition to the broad studies outlined in Table 5, the Action

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Plan for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada (DFO 2017a) includes more specific recovery measures focused on refining the understanding of the features, functions, and attributes outlined in Table 4, on threats to critical habitat and on supporting identification of additional areas for critical habitat identification.

Table 5. Schedule of studies to refine critical habitat and identify potential additional critical habitat areas for Northern and Southern Resident Killer Whales

Study	Status
Year-round comprehensive surveys to identify areas of occupancy	Underway
Identify key feeding areas throughout the year to determine whether they should be proposed as additional critical habitat	Underway
Identify activities other than foraging that may be important functions of critical habitat	Underway
Identify sources of acoustic disturbance that may negatively impact or affect access to critical habitat	Underway
Identify sources of physical disturbance that may negatively impact or affect access to critical habitat	Underway
Identify sources of biological and chemical contaminants that may negatively impact critical habitat	Underway
Identify factors that may negatively affect an adequate and accessible supply of prey in areas of critical habitat	Underway

7.3 Activities likely to result in the destruction of critical habitat

Under SARA, critical habitat must be legally protected within 180 days of being identified in a final recovery strategy or action plan and included in the Species at Risk Public Registry. Northern Resident Killer Whale critical habitat in Johnstone and southeastern Queen Charlotte Straits and Southern Resident Killer Whale critical habitat in the transboundary waters of southern BC has been protected through a SARA Critical Habitat Order since 2009. It is anticipated that protection of the four Resident Killer Whale critical habitat areas identified in this recovery strategy will be accomplished through a SARA Critical Habitat Order made under subsections 58(4) and (5), which will invoke the prohibition in subsection 58(1) against the destruction of any part of the identified critical habitat. The term "recovery strategy" is defined in subsection 2(1) of SARA as meaning "a recovery strategy included in the public registry under subsection 43(2), and includes any amendment to it included in the public registry under section 45". Thus, reading the definition of "critical habitat" in conjunction with the definition of "recovery strategy," the Critical Habitat Order will apply not only to the critical habitat identified in the recovery strategy, but also to any modification to the critical habitat subsequently made in an amended recovery strategy, without the need to amend the Critical Habitat Order.

The following examples of activities likely to result in the destruction of critical habitat are based on known human activities that are likely to occur in and around critical habitat and would result in the destruction of critical habitat if unmitigated. Some activities may impact critical habitat regardless of whether or not the whales are present within the area, while others would require

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the presence of the whales, dependent on the activity and the feature, function, or attribute affected by that activity. The list of activities is neither exhaustive nor exclusive and has been guided by the threats described in section 4 of this recovery strategy. The absence of a specific human activity does not preclude or restrict the Department or Parks Canada Agency's ability to regulate that activity under SARA. Furthermore, the inclusion of an activity does not result in its automatic prohibition and does not mean the activity will inevitably result in destruction of critical habitat. Every proposed activity must be assessed on a case-by-case basis and site-specific mitigation will be applied where it is reliable and available. Where information is available, thresholds and limits have been developed for critical habitat attributes to better inform management and regulatory decision making. However, in many cases knowledge of a species and its critical habitat's thresholds of tolerance to disturbance from human activities is incomplete.

Reduced prey availability

Availability of Chinook and Chum Salmon is key to the presence of Resident Killer Whales in critical habitat areas (Ford and Ellis 2005; DFO 2017b). Maintaining an adequate food supply for Resident Killer Whales depends on many factors, including the body size and condition of prey, as well as sufficient stock diversity of key prey species to maintain prey availability over time. Activities that result in insufficient abundance, quality, or availability of Chinook Salmon, Chum Salmon, or other Resident Killer Whale prey species could therefore lead to destruction of critical habitat. These include fishing for Chinook Salmon, Chum Salmon, and other important prey species, as well as activities that impact the survival and prey supply of these species such that they are not of sufficient abundance, quality, or availability for Resident Killer Whales.

Acoustic disturbance

There is growing awareness of the impacts of anthropogenic noise on cetaceans (Nowacek et al. 2007; Weilgart 2007). As Killer Whales rely on sound to carry out their life functions, including foraging and socializing, the acoustic environment is an important component of critical habitat. Threats to the acoustical integrity of critical habitat include both acute and chronic noise, and are discussed in detail in section 4.2.3 Underwater noise. Acute noise, including seismic surveys, military and commercial sonars, pile driving and underwater explosions, can result in behavioural changes and displacement from habitat for cetaceans (Morton and Symonds 2002; Weilgart 2007). Chronic noise is primarily associated with vessel traffic, and can result in masking of communication and echolocation signals of Killer Whales (Erbe 2002; Foote et al. 2004; Holt et al. 2009).

Environmental contaminants

Environmental contaminants pose a serious threat to Killer Whales. These contaminants and their sources are discussed in section 4.2.1. As high trophic level, long-lived animals, Killer Whales are particularly vulnerable to persistent bioaccumulating toxins (PBTs) that accumulate in their fatty tissues as they feed on already contaminated prey. The introduction of high levels of contaminants is therefore a threat to Resident Killer Whale critical habitat. While many contaminants are airborne and dispersed throughout the coastal waters of BC, the waters surrounding the lower mainland and Vancouver Island are particularly at risk due to their proximity to human settlement.

The threat of a spill of oil or other toxic material within the areas of critical habitat poses not only an immediate and acute risk to the health of Resident Killer Whale populations (see section

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4.2.4), but has the potential to make critical habitat areas uninhabitable for an extended period of time.

Physical disturbance

Vessels in close proximity to Killer Whales have the potential to disrupt behaviours, including foraging and beach rubbing (Williams et al. 2006; Lusseau et al. 2009). Additionally, prey must be physically accessible to Resident Killer Whales and physical obstacles at the surface and underwater which interfere with whales' abilities to pursue and capture prey represent a threat to critical habitat.

Killer Whales are particularly sensitive to disturbance while beach rubbing (Williams et al. 2006); the physical presence of vessels and other obstacles can not only disrupt beach rubbing, but can also prevent Killer Whales from approaching rubbing beaches to initiate this behaviour.

Geophysical disturbance

A key feature of the Northern Resident Killer Whale critical habitat in Johnstone and southeastern Queen Charlotte Straits is the presence of several rubbing beaches. Activities associated with the geophysical destruction of rubbing beaches are therefore threats to critical habitat. Rubbing beaches may also be vulnerable to activities that alter stream flow and siltation; thus, activities that occur upstream of these beaches, even outside of the designated critical habitat area, can pose a threat to critical habitat.

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Table 6. Examples of activities likely to result in the destruction of critical habitat of Northern and Southern Resident Killer Whales

Threat	Activity	Effect - pathway	Function affected	Feature affected	Attribute affected
Reduced prey availability	Fishing for Chinook Salmon, Chum Salmon, and other important prey species Other activities that are detrimental to habitat and survival of prey (e.g. fishing for forage fish species)	Loss of prey Loss of forage fish for prey species	Feeding and foraging	Availability of Chinook Salmon, Chum Salmon and other important prey species	Sufficient quantity and quality of Chinook Salmon to provide for profitable foraging Diversity of Chinook stocks with a variety of spatial and temporal migration patterns sufficient to maintain availability Sufficient quantity and quality of Chum Salmon and other species that comprise part of the Resident Killer Whale diet
Acoustic disturbance	Vessel traffic Seismic surveys, military, and commercial sonars Pile driving, underwater explosions	Chronic noise resulting in masking of communication and echolocation Acute and chronic acoustic disturbance resulting in disruption of behaviour or displacement from habitat	Feeding and foraging Reproduction, socializing, resting Beach rubbing (Northern Resident Killer Whales)	Acoustic environment	Anthropogenic noise level that does not interfere with life functions and is sufficient for effective acoustic social signaling and echolocation to locate prey Anthropogenic noise level that does not result in loss of habitat availability or function
Environmental contaminants	Release of deleterious substances Point source and non-point source pollution	Loss of prey or reduction in prey quality Loss of water quality	Feeding and foraging Reproduction, socializing, resting	Availability of Chinook Salmon, Chum Salmon, and other important prey species Water quality	Water quality of a sufficient level to support Chinook stocks Water quality of a sufficient level to support Chum Salmon and other species that comprise part of the Resident Killer Whale diet

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					Water quality of a sufficient level so as not to result in loss of function
Physical disturbance	Vessel approach to whales (within 200m) Vessel anchoring in vicinity of rubbing beaches Activities that prevent approach of whales to rubbing beaches; or that displace or disrupt rubbing behaviour Human presence on rubbing beaches when whales present or nearby	Reduction of physical space available to whales Displacement of whales from rubbing beaches, prevention of use of rubbing beaches	Feeding and foraging Reproduction, socializing, resting Beach rubbing (Northern Resident Killer Whales)	Physical space	Unimpeded physical space surrounding individual whales (minimum vessel approach distance 200m)
Geophysical disturbance	Shore-based industrial activities that could alter beach substrate Activities that result in alteration of stream flow to rubbing beaches, beach sediment, and siltation	Geophysical disturbance resulting in loss of function	Beach rubbing (Northern Resident Killer Whales)	Rubbing beach	Suitable physical habitat to allow for beach rubbing behaviour

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8. Statement on action plans

SARA's approach to recovery planning is a two-part approach, the first part being the recovery strategy and the second part being the action plan. An action plan contains specific recovery measures or activities required to meet the objectives outlined in the recovery strategy.

An action plan for Northern and Southern Resident Killer Whales was completed and posted to the Species at Risk Public Registry in 2017 (DFO 2017a). Additionally, several multi-species action plans that include Resident Killer Whales have been developed by the Parks Canada Agency and posted to the Species at Risk Public Registry. These include the multi-species action plan for Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve, and Haida Heritage Site (Parks Canada Agency 2016); the multi-species action plan for Pacific Rim National Park Reserve of Canada (Parks Canada Agency 2017a); and the proposed multi-species action plan for Gulf Islands National Park Reserve of Canada (Parks Canada Agency 2017b).

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Appendix A. Record of cooperation and consultation

Northern and Southern Resident Killer Whales are listed on Schedule 1 of the Species at Risk Act (SARA) and as an aquatic species are under federal jurisdiction and managed by Fisheries and Oceans Canada (DFO): 200 - 401 Burrard Street, Vancouver, BC. Southern Resident Killer Whales are a transboundary population and the United States has developed a recovery plan for Southern Resident Killer Whales as mandated under their Endangered Species Act.

To assist in the development of an initial draft of this recovery strategy, DFO brought together a diverse team of experts from various government, environmental, eco-tourism and non-governmental groups from both Canada and the United States. On the advice of the Species at Risk Coordinator at the BC Aboriginal Fisheries Commission, a letter of invitation followed up by phone calls was sent to all coastal First Nations seeking their interest in participating on the Recovery Team and/or Technical Workshop. No response was received from First Nations for inclusion on either initiative. Subsequent to the consultation process the Namgis First Nation has indicated an interest to be involved in future action planning and local implementation. A Technical Workshop was hosted in March 2004 to provide a forum for the sharing of knowledge and expertise on Killer Whales with an invited group of scientific and technical stakeholders which was invaluable in assisting the Resident Killer Whale Recovery Team to formulate an effective recovery strategy.

Public news releases announcing the Recovery Team and development of the recovery strategy and a notice of Public Consultations were sent to a distribution list of whale-related contacts provided to DFO in recent years from environmental groups, the eco-tourism sector, non-governmental organizations, government agencies and private citizens. An announcement was also placed in the Vancouver Aquarium Aquanews newsletter.

Additional input was sought through the internet (March 2005) on the draft recovery strategy and a discussion guide and feedback form were available. Responses were received from eco-tourism, non-government organizations, and the Mowachaht/Muchalaht First Nation. Input from the United States National Oceanic and Atmospheric Administration and the State of Washington Department of Fish and Wildlife was received through team participation. Feedback on the recovery strategy was also received from other government agencies including: the Department of National Defence, Province of BC, SARA Secretariat, Environment and Climate Change Canada and Natural Resources Canada. An external peer review was conducted by Volker Deecke, Ph.D., University of British Columbia, and Christophe Guinet, Centre d'Etudes Biologiques de Chize, France. All feedback from both government agencies and peer reviewers was incorporated into the recovery strategy.

A proposed version of the original recovery strategy was posted on the SARA Public Registry for a 60-day public comment period, from June 21 to August 20, 2007. During this time, numerous comments were received from a wide variety of sources including government agencies, commercial and recreational fishing groups, ecotourism operators, non-governmental organizations, and private citizens. All feedback from this comment period was considered and incorporated into the recovery strategy as appropriate. Following the public comment period, the proposed Recovery Strategy was revised by DFO in order to address public comments and to reflect the responsibilities of the competent Minister.

Minor amendments to the recovery strategy were made in 2011 to provide additional clarification regarding critical habitat for Northern and Southern Resident Killer Whales.

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Consultations were not held on the amendments as significant changes were not made to the recovery strategy.

In 2018, the recovery strategy was amended again to include identification of additional critical habitat for these populations and to provide minor updates to background and species information. A 30-day online external review on the draft amended recovery strategy was held June 12 – July 11, 2018. The external review was targeted for those potentially affected to provide feedback on the draft amended recovery strategy prior to public consultation. Numerous comments were received on the draft amended recovery strategy. 670 comments were submitted via an online feedback form on the consultation webpage set up by DFO's Regional SARA Program and 19 letters were received by email. Feedback was received from numerous groups and organization inclusive of Wildlife Management Boards, First Nations, the province of British Columbia, local government, commercial and recreational fishers, ecotourism operators, non-governmental organizations, other government agencies, and private citizens. Comments received from this review period were reviewed and one minor change was made to the draft amended recovery strategy (i.e. qualitative description of the attribute related to anthropogenic noise in Table 4).

Additional stakeholder, Aboriginal, and public input will be sought through the publication of the proposed document on the Species at Risk Public Registry for a 60-day public comment period. Comments received will inform the final document.

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Appendix B. Recovery team members

The following individuals composed the Recovery Team for the development of the 2008 recovery strategy.

Marilyn Joyce	Co-Chair: Resident Killer Whale Recovery Team Fisheries & Oceans Canada, Fisheries Management Branch Pacific Region, 200-401 Burrard Street, Vancouver, B.C., V6C 3S4, phone: 604-666-9965, email: joycema@pac.dfo-mpo.gc.ca
Lance Barrett-Lennard	Co-Chair: Resident Killer Whale Recovery Team Vancouver Aquarium Marine Service Center Stanley Park, Vancouver, BC V6B 3X8, phone: 604-659-3428, email: Lance.Barrett-Lennard@vanaqua.org
David Bain	Friday Harbor Laboratories, University of Washington, WA
Ken Balcomb	Centre for Whale Research, WA
Jim Borrowman	North Island Whale Watching Community, BC
John Durban	National Marine Fisheries Service, Alaska Fisheries Science Centre, National Marine Mammal Laboratory, WA
Graeme Ellis	Fisheries & Oceans Canada, Science Branch, Conservation Biology Section, BC
John Ford	Fisheries & Oceans Canada, Science Branch, Conservation Biology Section, BC
Christine Garrett	Environment and Climate Change Canada, Environmental Protection Branch, Commercial Chemicals Division , BC
Anna Hall	Whale Watch Operators Association North West, BC
Steve Jeffries	Washington Department of Fish and Wildlife, Marine Mammal Investigations, WA
Linda Jones	National Marine Fisheries Service, Northwest Fisheries Science Centre, National Marine Mammal Laboratory, WA
Brent Norberg	National Marine Fisheries Service, Protected Resources Division, WA
Peter Olesiuk	Fisheries & Oceans Canada, Science Branch, Conservation Biology Section, BC
Rich Osborne	The Whale Museum, WA
Rob Paynter	Ministry of Sustainable Resource Management, BC
Brian Reader	Western Canada Service Centre, Parks Canada Agency, BC
Peter Ross	Fisheries and Oceans Canada, Marine Environmental Quality Section, BC
Paul Spong	Orcalab, Hanson Island, BC
Andrew Trites	Marine Mammal Research Unit, Fisheries Centre, University of British Columbia, BC
Scott Wallace	(Alternate) Marine Conservation Caucus, Raincoast Conservation Society Sierra Club of Canada, B.C. Chapter, BC

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Gary Wiles	(Alternate) Washington Department of Fish and Wildlife, Marine Mammal Investigations, WA
Rob Williams	Marine Conservation Caucus, Raincoast Conservation Society, BC
Brian Riddell	Fisheries & Oceans Canada, Science Branch, Salmon and Freshwater Ecosystems, BC

Resource Personnel:

Paul Cottrell	Fisheries & Oceans Canada, A/SARA First Nations Coordinator, Treaty & Aboriginal Policy Branch, BC
Carole Eros	Fisheries & Oceans Canada, Species at Risk Recovery Planning Coordinator, Resource Management Pacific Region, BC
Annely Greene	Fisheries & Oceans Canada, Marine Mammal Program Manager, Resource Management Pacific Region, BC
Kathy Heise	Department of Zoology, University of British Columbia, BC
Lara Sloan	Fisheries & Oceans Canada, Communications Officer, Fisheries Management Pacific Region, BC

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Appendix C. Contaminant acronyms

APEs:	Alkylphenol ethoxylates
DBT:	Dibutyltin
DDT:	Dichlorodiphenyl trichloroethane
PAHs:	Persistent aromatic hydrocarbons
PBDEs:	Polybrominated diphenylethers
PBDTs:	Polybrominated trienylethers
PCBs:	Polychlorinated biphenyls
PCDDs:	Dioxins, polychlorinated dibenzo-p-dioxins
PCDFs	Polychlorinated dibenzofurans
PCNs:	Polychlorinated napthalenes
PCPs:	Polychlorinated paraffins
PCTs:	Polychlorinated terphenyls
SPFOs:	Perfluoro-octane sulfonates
POPs:	Persistent organic pollutants
TBT:	Tributyltin

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Appendix D. Description of critical habitat

Southern Resident Killer Whale critical habitat boundaries for transboundary waters of southern Georgia, Haro, and Juan de Fuca Straits. Described clockwise from the western boundary - all Latitudes are Decimal Degrees North; all Longitudes are Decimal Degrees West.

		Start and end coordinates			
	Point description	**Latitude Deg**	**Latitude Min**	**Longitude Deg**	**Longitude Min**
1	Western boundary	48	29.68	124	44.31
2		48	40.02	124	50.68
3	Excluding waters north of the line joining (Sooke Inlet)	48	21.30	123	44.32
4		48	20.33	123	42.90
5	Excluding waters north of the line joining (Royal Roads,	48	24.25	123	28.97
6	Esquimalt Hbr, Victoria Hbr)	48	24.57	123	22.61
7	Excluding waters west of the line joining (Cordova Channel	48	29.69	123	18.61
8	and Sidney Channel)	48	36.12	123	18.51
9	Excluding waters west of the line joining (western half of	48	37.04	123	18.49
10	Miners Channel and the waters west of Gooch Island)	48	39.70	123	17.72
11	Excluding waters west of the line joining (western half of	48	39.88	123	17.68
12	Prevost Channel and Moresby Passage)	48	42.96	123	19.63
13	Excluding waters west of the line joining (western portion of	48	43.34	123	19.88
14	Swanson Channel between Moresby Island and Prevost Island)	48	48.86	123	22.70
15	Excluding waters west of the line joining (western portion of	48	50.66	123	23.33
16	Trincomali Channel between Prevost Island and Parker Island)	48	52.61	123	23.92
17	Excluding waters west of the line joining (western portion of	48	52.85	123	23.92
18	Trincomali Channel between Parker Island and Galiano Island)	48	53.08	123	23.76
19	Excluding waters west of the line joining (western portion of southern Strait of Georgia)	48	54.28	123	20.67
20		48	55.39	123	21.98
21		49	0.00	123	18.88
22		49	10.39	123	22.82
23		49	13.58	123	21.97
24	Excluding waters north of the line joining (portion of southern Strait of Georgia)	49	13.58	123	21.97
25		49	14.00	123	21.09
26		49	14.18	123	19.22
27		49	13.79	123	17.21
28	Excluding waters north and east of the line joining (portion of southern Strait of Georgia)	49	13.79	123	17.21
29		49	12.87	123	15.75
30		49	9.01	123	16.48
31		49	3.39	123	9.24
32		49	3.47	123	8.48
	And bounded on the east and south by Point Roberts and the United States Border				

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Northern Resident Killer Whale critical habitat boundaries for Johnstone and southeastern Queen Charlotte Straits. Described clockwise from the western boundary - all Latitudes are Decimal Degrees North; all Longitudes are Decimal Degrees West.

		Start and end coordinates			
	Point Description	**Latitude Deg**	**Latitude Min**	**Longitude Deg**	**Longitude Min**
1	Western boundary (Vancouver Island to Numas Island)	50	36.98	127	11.00
2		50	46.24	127	6.76
3	Northern boundary (Numas Island to Broughton Island)	50	46.27	127	5.26
4		50	46.41	126	48.27
5	Northern boundary (Broughton Island to Screen Island / Eden	50	46.13	126	47.30
6	Island)	50	44.95	126	43.55
7	boundary line running from Eden Island to Crib Island	50	44.79	126	43.22
8	(including waters of Queen Charlotte Strait and excluding waters of Trainer Passage)	50	43.67	126	42.73
9	boundary line running from Crib Island to House Ilet (including	50	43.33	126	42.58
10	waters of Queen Charlotte Strait and excluding waters of Arrow and Spring Passages)	50	40.16	126	41.21
11	boundary line running from House Ilet to Swanson Island	50	40.16	126	41.21
12	(including waters of Queen Charlotte Strait and excluding waters of Knight Inlet)	50	37.75	126	43.86
13	boundary line running from Swanson Island to Compton	50	36.06	126	41.77
14	Island (including waters of Blackfish Sound excluding waters of West Passage)	50	35.84	126	41.42
15	boundary line running from Compton Island to Harbledown	50	35.50	126	40.86
16	Island (including waters of Blackfish Sound excluding waters of Whitebeach Passage)	50	35.38	126	40.68
17	boundary line running from Harbledown Island to Parson	50	35.19	126	40.93
18	Island (including waters of Blackfish Sound excluding waters of Parson Bay)	50	34.43	126	40.73
19	boundary line running from Parson Island to West Cracroft	50	33.65	126	39.95
20	Island (including waters of Blackfish Sound excluding waters of Baronet Passage)	50	32.98	126	39.73
	Waters of western Johnstone Strait bounded on the north by West Cracroft Island, the mainland, Hardwicke Island and West Thurlow Island with no exclusions except:				
24	boundary line running from West Cracroft Island to the	50	31.32	126	20.35
25	mainland (including waters of western Johnstone Strait excluding waters of Havannah Channel)	50	31.09	126	17.05
26	boundary line running from the mainland to Hardwicke Island	50	28.46	126	2.54
27	(including waters of western Johnstone Strait excluding waters of Sunderland Channel)	50	26.57	125	57.94
28	boundary line running from Hardwicke Island to Eden Point	50	24.58	125	48.29
29	on West Thurlow Island (including waters of western Johnstone Strait excluding waters of Chancellor Channel)	50	23.91	125	47.38
30	boundary line running from Eden Point to Tyee Point on West	50	23.91	125	47.38
31	Thurlow Island (including waters of western Johnstone Strait excluding waters of Vere Cove)	50	23.26	125	47.06
32	Eastern boundary line running from West Thurlow Island	50	23.42	125	34.39
33	(including waters of western Johnstone Strait excluding waters of eastern Johnstone Strait and Mayne Passage)	50	21.88	125	34.23
	Waters of western Johnstone Strait bounded on the south by Vancouver Island - no exclusions except:				
35	boundary line running from Graveyard Point to Kelsey Bay	50	23.45	125	56.71
36	Harbour on Vancouver Island (including waters of western Johnstone Strait excluding waters of Salmon Bay)	50	23.80	125	57.62

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Northern and Southern Resident Killer Whale critical habitat boundaries off Southwestern Vancouver Island. Described counter-clockwise from the northern boundary - all Latitudes are Decimal Degrees North; all Longitudes are Decimal Degrees West.

		Start and end coordinates			
	Point Description	Latitude Deg	Latitude Min	Longitude Deg	Longitude Min
1	Northern Boundary (Vancouver Island running southwest offshore)	48	59.7	-125	40.15
2		48	41.72	-126	17.88
3	Offshore Boundary	48	13.95	-125	44.61
4	Waters adjacent the U.S.A. Border	48	29.72	-124	44.32
5	Waters adjacent Southern Resident Killer Whale critical habitat in transboundary waters of southern Georgia, Haro, and Juan de Fuca Straits	48	40.04	-124	50.66
6	And bounded by Vancouver Island to the Northwest boundary				
7	Excluding waters north of the line joining (Nitinat Inlet)	48	40.05	-124	50.99
8		48	40.13	-124	51.3
9	Excluding waters northeast of the line joining Cape Beale and Amphitrite Point (Barkley Sound)	48	55.22	-125	32.391
10		48	47.174	-125	13.039

Northern Resident Killer Whale critical habitat boundaries in western Dixon Entrance. Described clockwise from the western boundary - all Latitudes are Decimal Degrees North; all Longitudes are Decimal Degrees West.

		Start and end coordinates			
	Point Description	Latitude Deg	Latitude Min	Longitude Deg	Longitude Min
1	Western Boundary (Langara Island Northward)	54	15.38	-133	3.5
2		54	15.99	-133	3.5
3	Northern Boundary	54	16.05	-131	40.45
4	Eastern Boundary	54	9.13	-131	40.43
5	Excluding waters south of line (McIntyre Bay)	54	5.491	-132	15.97
6	Bounded by Graham Island on the Southern Boundary to	54	11.07	-133	1.55
7	Northward to Langara Island, excluding waters west of the line	54	11.43	-133	0.75
8	Bounded on the western Boundary by the eastern side of Langara Island up to Langara Light				
9	Excluding waters south of line (Virago Sound, Naden Harbour)	54	5.86	-132	26.26
10		54	5.57	-132	34.3

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GCCMS #: 2018-AE-00428
EKME # : 3945044

To:
Pour: Catherine Blewett Date:

Object:
Objet: **Approval of the Proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales**

From / De: Nicholas Winfield, DG, Ecosystems Management AUG 17 2018

Via: Philippe Morel, ADM, Aquatic Ecosystems AUG 20 2018

Additional Approvals:
Autre(s) approbation(s):

Arran McPherson, A/ADM, Ecosystems and Oceans Science _____
Sylvie Lapointe, ADM, Fisheries and Harbours Management _____
Stephen Sharzer, General Legal Counsel, Department of Justice _____

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Remarks: This briefing note was developed in consultation with the following
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Sylvie Lapointe, ADM, Fisheries and Harbours Management

Stephen Sharzer, General Legal Counsel, Department of Justice

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Sylvie Lapointe, ADM, Fisheries and Harbours Management 08 AOUT 2018

Stephen Sharzer, General Legal Counsel, Department of Justice

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Arran McPherson, A/ADM, Ecosystems and Oceans Science
Sylvie Lapointe, ADM, Fisheries and Harbours Management
Stephen Sharzer, Senior General Counsel and Head, Legal Services

Approved via email, initialed.

AUG 16 2018

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ACTION REQUEST / FICHE DE SERVICE

From/De : Chiu, Scott **Docket No. \ N° Dossier** : 2018-AE-00428

Subject/ Objet : Approval of the Proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales

Topics :

Action Sec. resp. : NCR_DM

Dated/En date du	Input/Entrée	Deadline/Échéance
	7/31/2018	

ACTION REQUIRED/ SUITE A DONNER

MO DUE DATE:

Date	Referred to Transmis à	Referred by Transmis par	Remarks Observations	Initials Initiales
AUG 2 0 2018	MO	DMO	FOR DECISION	
AUG 2 0 2018	George	Janie	"	
Aug 20	Caitlin	Danica	For review	
Aug 28	Ash		Oh to sign	

s.21(1)(a)
s.21(1)(b)
s.23

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20/08/18
9:28 AM

Docket # : 2018-AE-00428
Xref # :
Date Created : 31/07/18

HISTORY REPORT

Lead : NCR_AE_EM_SAR
ILO : NCR_MINO
ILO Due :
Subject : Approval of the Proposed Amended Recovery Strategy for the Northern and Southern Resident Killer Whales

Instructions:

Assigned By	Assigned To	Task	Assign Date	Deadline	Completed date
AE	NCR_AE_EM_SAR	PREP	31/07/18		31/07/18
AE NCR_AE_EM	APP	31/07/18		1/08/18	
006 NCR_AE_ADMO	APP	1/08/18		2/08/18	

Note: See inbox.
Comments:
- Received at ADMO. AhpiangM 1/08/18 10:28 AM
- Received at ADMO. AhpiangM 2/08/18 1:51 PM

AE NCR_AE_EM	REVISE	1/08/18	8/1/2018	2/08/18

Note: Please revise to fit template. Should not exceed three pages. Hardcopy in your inbox for pickup. Due to ADMO by 3:00pm August1.

AE NCR_AE_EM	REVISE	2/08/18	8/2/2018	2/08/18

Note: Revise as per ADM comments. Due to ADMO by 4:00pm August 2.

006 NCR_AE_EM_SAR	REVISE	2/08/18	8/2/2018	2/08/18
AE NCR_AE_EM	APP	2/08/18		2/08/18
AE NCR_AE_EM	REVISE	7/08/18	8/9/2018	8/08/18

Note: [redacted]

006 NCR_AE_EM_SAR	REVISE	8/08/18	8/8/2018	13/08/18

Note: Please see hardcopy for revisions.

AE NCR_AE_EM	APP	13/08/18		13/08/18

AUG 2 0 2018
Jasmine @ 10:00am

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AE NCR_AE_EM	REVISE	16/08/18	8/17/2018	16/08/18

Note: [redacted]

006 NCR_AE_EM_SAR	REVISE	16/08/18	8/17/2018	17/08/18
006 NCR_AE_EM	APP	17/08/18		17/08/18
006 NCR_AE_ADMO	APP	8/08/18		20/08/18

Comments:
- Received in ADMO. AhpiangM 17/08/18 3:02 PM

006 NCR_AE_ADMO	APP	2/08/18		8/08/18
AE NCR_EOS	APP	2/08/18	8/3/2018	8/08/18

Comments:
- Email received and sent to ESD for prior approval / / Received from ESD with comments for Arran's appoval HodginsJ 3/08/18 8:40 AM
- Approved by EOS ADM; HD to AE by FC. fc CharbonneauF 8/08/18 12:32 PM

007 NCR_EOS_ESD	APP	3/08/18	8/3/2018	3/08/18

Note: for approval prior to ADM's sign off

Comments:
- HD to FPS Aug 3 CrawfordK 3/08/18 8:56 AM
- HD to ADMO Aug 3 CrawfordK 3/08/18 2:53 PM

007 NCR_EOS_ESD_FPS	APP	3/08/18		3/08/18

Note: Please approve by 11pm today

Comments:
- HD to DGO by Rowena DamoursK 3/08/18 11:41 AM

AE NCR_FHM_ADMO	APP	2/08/18	8/3/2018	2/08/18
AE NCR_FHM_FRM	APP	2/08/18	8/3/2018	7/08/18

Note: Please review and approve docket. BF is Aug 3 at 1pm.

FHM NCR_FHM_ADMO	APP	7/08/18		8/08/18

Note: HD to ADMO

AE NCR_LEGAL	APP	2/08/18	8/3/2018	7/08/18

Comments:
- rec' for urgent approval ObrienJ 2/08/18 4:05 PM
- please see my email sent to Melanie A ObrienJ 7/08/18 2:31 PM

007 NCR_AE_ADMO	PRCSS	8/08/18		13/08/18

Note: ADM approved as requested;the document will be HD shortly.

Comments:

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- FHM-ADM approved. Will HD to AE shorty. KaletaM 8/08/18 1:51 PM

AE NCR_LEGAL	APP	13/08/18	8/15/2018	16/08/18

Comments:

- Received, thank you. MccormickR 13/08/18 2:58 PM
- [redacted]

008 NCR_AE_ADMO	PRCSS	16/08/18	16/08/18

Note: will HD

Comments:

- [redacted]

AE NCR_DM	APP	20/08/18

Note: Docket will be hand delivered shortly.

Attachments
For Minister-Proposed_RKW_aRS-2.DOCX
2018-AE-00428 - Approved by EOS.PDF
FHM-ADM approval -Aug 8 -2018-AE-00428.TIF
Edits_RKW aRS_Aug9_FINAL.DOCX
2018Proposed_RKW_aRS_Aug10_Pac_FINALV.DOCX
Tab 2-[redacted]

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s.19(1)

Khanna, Sukriti

From: Kristin Wilkinson - NOAA Federal [redacted]
Sent: August-30-18 1:15 PM
To: Thornton, Sheila
Cc: Cottrell, Paul; Teri Rowles; Lynne Barre
Subject: Re: Transboundary Coordination Call and J50 Updates

Hi All -

I was able to confirm that Paul is available on Wednesday, September 5th at 9 am.

Please call into 888-283-0166, [redacted] Google Invite to follow.

We look forward to talking with you then,

Kristin

On Thu, Aug 30, 2018 at 11:43 AM, Thornton, Sheila <Sheila.Thornton@dfo-mpo.gc.ca> wrote:
Hi Kristin,

J50 has not been sighted by DFO Science since August 14th (Paul - please confirm that C&P or FM has no further sightings). My understanding is that the last J50 sighting was Aug 24th by a member of the PWWA. Here are the most recent DFO Science SRKW encounters:

August 25th - 160 nm of search effort - Ks and Ls were sighted off Swiftsure; unable to locate Js.
August 27th - very poor conditions, 1.4 to 3.2m swell, visibility from 100m to 2 nm, but mostly 200m. In and out of heavy fog banks all day. @14:24 intercepted Js Ks and Ls @ 48' 32.1", 124' 50.8", animals were spread out for miles. Incomplete encounter, some Js were identified but unable to locate any members of the J16s. Incomplete encounter.
August 28th - Ks and Ls sighted off Swiftsure; animals spread out in poor conditions (2.2m swell, vis zero to 2 mi in fog, mist and haze). Incomplete encounter.

Re: Sept 5th - I will be en route to Friday Harbor - likely on the 2 pm ferry. The morning or late afternoon would work for me.

Kind regards,

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

From: Kristin Wilkinson - NOAA Federal [redacted]
Sent: August 30, 2018 11:04 AM
To: Thornton, Sheila; Cottrell, Paul

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Cc: Teri Rowles; Lynne Barre
Subject: Transboundary Coordination Call and J50 Updates

Paul and Sheila,

I wanted to reach out to see if you or any of your DFO colleagues have seen the J16s and J50 recently. It's been 12 days since she was sighted in the U.S. and the last sighting I heard of J50 was on August 21st off Nitinat and then on August 24th when they were briefly headed inland before turning around near the Jordan River. We would appreciate any sighting information (if a text is easiest I can always be reached on my cell, [redacted]

We are also working on contingency planning for any future scenario that might unfold. I've attached two documents here, both documents are internal to NOAA at this point in time;

1. J50, Options to Intervene as/if Necessary - while we have not made a decision to intervene this statement outlines options if her overall condition or behavior changes.
2. Intervention Options, Risks/Benefits/Needs/Goals - this document is in draft form as I identify resources available to us.

We would like the response to J50 to be a transboundary effort. Would the two of you be available for a call next Wednesday, September 5th? Is there anyone else I should invite to participate?

Many thanks,

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted]Cell

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted]Cell

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Khanna, Sukriti

From: Kristin Wilkinson - NOAA Federal <[redacted]>
Sent: August-30-18 11:05 AM
To: Thornton, Sheila; Cottrell, Paul
Cc: Teri Rowles; Lynne Barre
Subject: Transboundary Coordination Call and J50 Updates
Attachments: J50 Options to Intervene_082818_BT cleared.docx; SRKWInterventionOptions_2018_Updated.docx

Paul and Sheila,

I wanted to reach out to see if you or any of your DFO colleagues have seen the J16s and J50 recently. It's been 12 days since she was sighted in the U.S. and the last sighting I heard of J50 was on August 21st off Nitinat and then on August 24th when they were briefly headed inland before turning around near the Jordan River. We would appreciate any sighting information (if a text is easiest I can always be reached on my cell, [redacted]

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West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

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J50
Options to Intervene as/if Necessary

The NMFS West Coast Region (WCR) is working closely with the Northwest Fisheries Science Center (NWFSC), NMFS Office of Protected Resource's Marine Mammal Health and Stranding Response Program (MMHSRP), Fisheries and Oceans Canada (DFO), veterinarians, and other partners to monitor the condition and behavior, collect samples (breath, feces, skin, mucous, etc.), and provide medical treatment (antibiotics, dewormer) to J50, an ailing young female Southern Resident killer whale who is important to the population based on her reproductive potential.

The NMFS NWFSC and Southwest Fisheries Science Center will be conducting field research in September to collect quantifiable information on the body condition of J50 and the entire Southern Resident population via photogrammetry and additional observations/samples. Additional research teams from the Center for Whale Research and University of Washington are also studying the population and veterinarians will be available to conduct periodic follow-up health assessments.

If at any time J50's overall condition or behavior changes (lagging significantly behind her pod, extended logging at the surface, full separation from pod, out of normal habitat sightings, etc.) we will consult with experts to evaluate the risks to J50 and to the population, discuss specific intervention protocols, and identify resources with potentially high costs, in coordination with OPR and NWFSC, to inform a decision of whether to intervene by WCR leadership. The OPR/MMHSRP permit provides broad authorization for veterinary medical intervention as needed. Specific intervention options that are currently part of the contingency planning include 1) capture and temporary (~1-2 hours) holding for assessment and 2) capture and short-term rehabilitation.

1) A capture and release effort by an international team of experts could be conducted to obtain a full physical assessment of J50's condition. The exam would take place on a vessel and J50 would be released and reunited with her pod as soon as possible. The physical exam could include lung, cardiac, GI tract, blood analysis and identifying conditions that could be treated such as; fungal or bacterial infections, parasites, foreign bodies or anemia. Ideally, this effort would be conducted during a time of natural separation (J50 has a history of short-term separation of 2-3 hours from her pod). If a health condition was detected during this examination that could be treatable in care, J50 could be moved to short-term rehabilitation (Option 2).

2) A capture and short-term holding could be conducted if the veterinary assessment determines that J50 has a condition that is treatable in a rehabilitation setting. She would be moved into a temporary land-based medical pool for stabilization prior to a net pen at the NWFSC Manchester lab for care and treatment which is available through mid-October. Our goal would be to provide her with the best possible care and treatment within a short-term time frame. However, WCR would need to be prepared to house her longer-term if her condition did not improve before her pod leaves the area. These activities are time sensitive based on her condition and potential opportunities for reintroduction to her pod.

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Additional contingency planning is being conducted if she live strands on a beach. In this instance, we would immediately follow standard stranding network procedures for response, veterinary assessment, and (if deemed appropriate) transport and rehabilitation. This rehabilitation process could be short- or long-term depending upon the severity of her condition.

Under all intervention options, our goal is to reunite J50 with her pod as soon as possible. We want to balance needed treatment and nutritional supplementation while avoiding imprinting, behavior changes, and causing distress in the J pod. While current field activities occur, we will continue coordination and contingency planning efforts with Canada to identify resources and prepare for the possibility of a live stranding, capture, and need for rehabilitation. This entire process includes significant uncertainty and requires careful consideration of potential risks, including death, and the future reproductive benefits to the population.

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Southern Resident Killer Whale Intervention Options

Written by K.Wilkinson

Reviewed by L. Barre & NOAA OPR

Concerns for all intervention options:

- Negative perceptions by some that we are not doing enough or by others that we are doing too much to help an individual
- Impacts to other members of the population as a result of intervention for J50
- Perception that we did not take time to listen to the public
- Potential for non-releasability determination as an outcome of any capture or rehabilitation option
- Negative public perception of partnering with Sea World and association with killer whales in captivity

1. **Continued Remote Monitoring, Sampling, and Medical Treatment**
    a. Goal: Diagnosis and remote treatment of condition
    b. Risks:
        i. Remote sampling likely to not determine cause of illness and her body condition likely will result in carcass not being recovered, therefore she may disappear with no necropsy and no definitive cause of death. Therefore we will not ever know what should/would be best in future responses and it will not be as informative for future recovery actions or response efforts.
        ii. Antibiotics may alter bacterial flora (both beneficial and pathogenic); an incomplete dose may be given due to delivery logistics possibly reducing effectiveness; follow up dosing may be logistically challenging possibly reducing effectiveness; and the antibiotic choice may or may not address the underlying issue.
        iii. May require multiple close approaches for continued assessment and treatments; possible disturbance to Jpod; possible behavioral change from J50 (avoidance) making diagnostics, monitoring and treatment more difficult or stressful in the future.
        iv. Drug trial on live, free swimming, wild SRKW. We currently do not have a mechanism to fully document the effectiveness of specific drugs and therefore whether they provided any rapid improvement in the overall condition of the animal since we do not have a confirmed diagnosis.
        v. Live fish trials for medical treatment unlikely to be effective for targeted oral medication to an individual and perceived as precedent setting feeding effort
    c. Benefits
        i. Documentation of condition and behavior over time will be useful in this case and in future cases.
        ii. Sample collection analysis and archived samples should be available for future cases.

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iii. Opportunity for tool development of live fish trial as potential option for oral medication.
iv. Broad spectrum antibiotic and antiparasitic given remotely may reduce the impacts of bacterial infection and parasitic load which decrease her energetic needs.

d. Other concerns
   i. Public perception is that we are helping J50 recover with medical treatment (antibiotics) but this treatment is not as effective as it could be if we truly understood what the source of her malnutrition is.
   ii. Tribal relations are concerned about the fish trial being on hold with NWFSC off the water. Emailed NOAA 8/16/18. Responded to by K.Wilkinson on 8/17/18

e. Resources Needed
   i. Vessels & Crew for monitoring and sample collection
      1. NWFSC (Hanson field season starting September 5th)
      2. Back up: SeaDoc Vessel
      3. Other partners on water: Soundwatch for education, UW for fecal samples, Center for Whale Research for observations, WDFW for enforcement.
      4. UAS on water assessments beneficial but no source in Canada and limited assets in US (Durban field season September 3rd)
      5. Sample analysis (NWFSC, Sea World and other labs)
   ii. Needs for medical treatment
      1. Vancouver Aquarium, Sea World, SeaDoc veterinary expertise
      2. Drugs, darts
      3. Better and more rapid diagnostics

2. **<u>Temporary Capture Health Assessment and Treatment</u>**
   a. Goal: Improve diagnoses of health status, potential pinpoint or rule out cause(s) or contributing factor(s) of malnutrition and continued decline, provide more advanced medical treatment, section e below.
   b. Risks:
      i. Acute death during capture through stress, capture myopathy, or net
      ii. Injury during capture (capture myopathy or aspiration of water or injury via net) which may lead to short term holding or reduce release success
      iii. Increased short term stress to J50 and her pod if present during capture
      iv. May not obtain enough real time data to make informed decisions on next steps while in the field
      v. Capture release may make a future capture event more difficult if one is needed due to J50 avoidance behavior or pod behavior
      vi. Assessment includes invasive procedures
      vii. Rapid decision making while she is in hand to inform immediate release, short term holding and rehab, long term rehabilitation – if all resources are not immediately available we risk not having the best possible care available to her

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c. Benefits:
    i. Diagnostics and analysis could be performed on the samples and information collected to make better informed decisions moving forward.
    ii. Better target treatments
    iii. Improve potential for success with better treatment strategy
d. Other
    i. Negative public perception that we went too far, particularly if capture includes removing animal from her mother
    ii. Tribal response to this activity unknown
e. Resources Needed:
    i. Capture expertise
        1. Capture proposal by Jeff Foster, received by NOAA on 8/17, 8/22
            a. Hoop net needed, may need to fabricate (~$900, Jeff was given permission to order this on 8/16, to be reimbursed)
    ii. Stretcher, poles, and sling (Made available by Sea World, will ship to SeaDoc on 8/22, WCR purchase in process)
    iii. Crane for lifting in and out of the water <Nordland II, Sound Guardian no longer available?> Jen Olson researching 8/30/18
    iv. Vessel large enough to put her on the back deck <Currently unidentified, Nordland II, Sound Guardian no longer available> Jen Olson researching 8/30/18
    v. Thick foam padding for the deck (Purchased by Sea World, will ship to SeaDoc on 8/17)
    vi. Veterinary expertise and medical treatment available (an entirely new team of experts would need to be assembled to achieve the below goals).
    vii. Release criteria met; tag with d-tag upon release
    viii. If deemed non-releasable after the physical exam we would need a short or long term rehabilitation location or facility identified. A transport box would need to be available to get her to the rehabilitation facility (this is available by Sea World and will be shipped to Anacortes on 8/23 for staging).
f. Goals:
    i. Blood
    ii. Full physical exam
    iii. Auscultate and ECG
    iv. Ultrasound full body and echo if warranted
    v. Endoscope the upper GI tract for parasites, foreign body, lesions, food sample
    vi. Fecal sample
    vii. Weight
    viii. Length
    ix. Provide fluids, nutrients, antibiotics and deworming treatment and other as needed or deemed warranted
    x. Tag with D-tag when release

3. **<u>Temporary Care and Rehabilitation <Less than one month></u>**

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a. Goal: Release and reintroduction to her pod
b. Risks
    i. Death during capture, transport or rehabilitation
    ii. Negative public perception of our activities and potential for non-releasability determination
    iii. Cost
    iv. Logistics
    v. Staffing
c. Benefits
    i. Intervention is an alternative to potential for visible slow decline until death
    ii. Improved diagnosis and rule-out
    iii. More targeted and effective medical treatment
    iv. Handling and learning experience
    v. If successful, intervention could increase chance for survival and reproduction, she may birth up to 5 calves in the future
    vi. If successful, positive public perception of our activities
d. Resources Needed
    i. Transport box including sling/stretcher/poles.
        1. The transport box weighs 3,000 lbs.
        2. The stretcher weighs 300 lbs.
        3. The whale weighs ~ 1300 lbs.
        4. Each foot of water weighs 4,400 lbs. We would need at least 18" to 24" of water in the transport box.
    ii. Transportation for transport box and J50 to Manchester, WA.
        1. Barge contacts for transport box logistics: NOAA Interns assigned to contact with a list of questions on 8/17
            a. Blackwater Marine, George Lulham, [redacted]cell
                i. Where is your barge based? Seattle and Anacortes
                ii. Is there shoreside secured storage where a transport box could be sent and staged in the interim? If so, is there a cost for short term storage? Yes, $100 per day if our company is used for transport.
                iii. Can you accommodate a 18' long, 5' wide, 5' tall transport box on the barge? Yes
                iv. Can you accommodate the weight of 14,000 lbs.? And can you accommodate a live load? Yes and Yes
                v. Can you allow our staff to be on board with the transport box? Yes
                vi. Can you take your barge to the San Juan Islands? Yes, also have a third facility in Anacortes, with night watchman, secure location

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vii. Do you have a crane on board? If so, what is the weight limit? Yes, 25 tons/50,000 lbs
viii. Can the transport box be removed from your barge using your crane onto land with a weight of 7,000 lbs.? Yes
ix. What is the daily operational cost to use this vessel? $4700 per day
x. How much lead time do you need to get this vessel underway? Ideally at least one day, but if already active in a project, can be underway in a matter of hours
xi. How long would it take you to get up to San Juan Island? From Anacortes to Friday Harbor: 4 hours Out of Seattle: 17 hours
xii. How long would it take you to get from San Juan Island to Manchester? About the same: 17 hours

b. Thompson Pile, Doug Fritts, [redacted] (360)769-8428 (has not returned calls or emails as of 8/22)
c. Nordland II, San Juan Ferry and Barge, (360) 378-4404 (cannot handle the load needed, not a viable option for long transport - could be used for physical assessment possibly)

iii. Transport and rehabilitation veterinary and husbandry staff
1. Sea World has offered 6-8 vet and husbandry staff for 4 weeks to oversee this aspect of operations.

iv. Temporary pool
1. A temporary pool filled with seawater could be utilized for 1-2 weeks while she is stabilized. Then she could be moved into a sea pen.
a. NOAA Manchester is an available location for this. They do have access to sea water and have the appropriate water filtration and disposal already in place. They have identified locations that would work for a 30' pool, unfortunately they have no indoor locations that would work for that size of a pool. The best they could offer for an inside structure is a farm-tek fabric type building that measurement 24' x 50'. Both the outside and inside areas could be readied for a tank with a little effort.
b. Plumbing preparation costs are $1000 - $1200.
c. Sand to create a level area for the pool is estimated to be $200-$300
d. This pool is being ordered on 8/17 and delivered to Manchester for staging. 18'x40' oval; 52" deep.
i. http://www.royalswimmingpools.com/1840-Oval-54-Matrix-Above-Ground-Pool-Kit.html

v. Rehabilitation Facility (see below)
vi. Sea Pen (see below) Will be needed if any rehab is attempted

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vii. Barge $36,000
    1. Includes skipper and crew. With a budget of $500,000k (offered by Sea World) this would give us ~ 13 days of access to her. Additional barge contacts listed below for transport box.
viii. Releasability Criteria
    1. Goal: To rehabilitate and release her with reintroduction to her pod. NOAA Fisheries has developed Final polices and best practices : marine mammal stranding response, rehabilitation, and release : standards for release that can be viewed at: https://repository.library.noaa.gov/view/noaa/14917
    2. Risks
        a. Public perception
        b. Death
    3. Benefits
        a. Continued life and medical treatment
    4. Resources Needed
        a. Consultation panel to review releaseability
        b. Long Term Care Facility if deemed non-releasable
            i. Will need to work with NOAA HQ Permits Office on placement

4. **Long-Term Care and Rehabilitation for Release <More than one month>**
    a. Goal: Release and reintroduction to her pod
    b. Risks
        i. No improvement, continued decline, death
        ii. Cost would be high; logistics challenging, staffing difficult to maintain
        iii. Imprinting may be hard to de-program for release; timing and location of release critical
        iv. Release location and timing may be challenging if we have to release in Canada
        v. She may or may not have learned to effectively feed in the wild prior to capture, therefore risks for release
        vi. Negative public perception of our activities and potential for non-releasability determination
    c. Benefits
        i. Best manner to follow and adjust treatment effectiveness
        ii. Providing adaptive management capabilities and follow diagnostics to improve medical treatment
        iii. Handling and learning experience in rehabilitation
        iv. If successful, she may birth up to 5 calves in the future
        v. If successful, positive public perception of our activities
    d. Resources Needed
        i. Sea Pen

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1. NOAA Manchester: The Navy has offered up the use of a 40x40 net pen free of charge to this effort, NOAA has a 40x40 net pen webbing that was used for Springer (photo in Google Drive). The net pen needs $200 of repairs and NOAA Manchester staff labor would need to be covered for this work. There is no cost for the Navy to deploy the net pen but NOAA Manchester staff would need to help get it deployed. Net weights are available at NOAA Manchester for our use. The area of Clam Bay is in federal waters and for the most part is protected, there is a 200 ft. keep back sign that is posted with other keep out government signage. We would likely need to employ a security guard 24/7 at this location but the land based side is secured. They need 2-3 days lead time. This location is available to us now through mid to late October. After this time there is a substantial construction project with pile driving.
    a. Staff Assistance at Manchester:
        i. Penny Swanson, [redacted] cell
        ii. Barry Berejikian, [redacted] cell
        iii. Rick Goetz, [redacted]
        iv. James Hackett, [redacted] cell
    b. Food Source: We do have 250 Chinook salmon in culture, but they are still fairly small (~700 g each) and intended for experiments. We may be able to spare 50 of these, although that's clearly not much of a contribution. The hatcheries in the region are full of Chinook now, but their condition would be less than ideal. Barry Berejikian, Supervisory Research Fishery Biologist
    c. Heavy equipment: Forklift on site that can lift 5,000 lbs. Ideally we would hire a crane service. James Hackett is working with his contacts to determine size, cost, and availability. An initial crane estimate is $850 (provided by Barry). Western Crane setup and mob is $690.00 then $195.00 per hour, overtime is time & 1/2/hr. +$35.00
        i. Dave V. Will/Operations Manager, Western Crane, Inc., P.O. Box 68068 Seatac, WA 98168-0068, Office/Yard: 7245 W Marginal Way SW, South Bay #2, Seattle, WA 98106, 206-242-9900, operations@westerncrane.com
    d. Barge contacts for transport box logistics:
        i. Blackwater Marine, George Lulham, [redacted]
        ii. Thompson Pile, Doug Fritts, [redacted] (360)769-8428 (Unresponsive as of 8/23)

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e. We have two possibilities to land the whale at NOAA Manchester.
    i. Bring the whale to the EPA pier where our net pens are located and barge crane it onto our NOAA trailer then driving it to the pool location approximately 3000 feet from the pier.
    ii. Bring the whale to the Navy launch crane it onto our NOAA trailer and then transport it to the pool location approximately 3/4 mile from the launch.
        1. Both locations will stay on Federal land EPA, Navy, and NOAA during the transport.

ii. Rehabilitation Facility
    1. Vancouver Aquarium
        a. Issues: Export Permit (MMPA/ESA permit on hand; Appendix II CITES requires only export permit which we have valid through Nov; but will require a DFO import permit which is likely not trivial; will require medical clearance in and out of Canada; we have not agreed on what that includes)
    2. Sea World
        a. J50 would need to be stabilized at a temporary facility and then flown to San Diego. Logistics is complicated and public perception would be a challenge.

iii. Barge – Not cost feasible but if donated might be

5. <u>Live Stranding on the Beach</u>

a. Goal: Remove from the beach and transfer to care facility
b. Risks
    i. Physical and physiological issues including stress from beach strandings
    ii. Other pod members stranding with her
    iii. Logistical constraints removing her from the beach making response and live animal rescue difficult to impossible
    iv. Her condition leading to beach stranding or a long time on the beach likely will significantly decrease the chances of rehabilitation and release
    v. Public observation and sharing information via live stream or social media depending on site of the stranding
    vi. Death

c. Benefits:
    i. Full necropsy if she passes away
    ii. If possible to bring her into rehabilitation, will do best diagnostics and treatment possible in preparation for release

d. Other

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i. Public perception that we did not intervene soon enough

e. Resources Needed
   i. Stranding Response Team
      1. The Whale Museum is the local Stranding Network Partner
      2. Additional support to secure location, respond to public depending on location
   ii. Supportive care supplies
      1. Currently on hand and stored at The Whale Museum
   iii. Veterinarian expertise
      1. Dr. Joe Gaydos is based on Orcas Island and is a Co-Investigator on The Whale Museum's Stranding Agreement
   iv. Transport box including sling/stretcher/poles
      1. Will be shipped and stored on Orcas Island on 8/22
   v. Transportation to facility
      1. See barge options for the transport box
   vi. Short or long term rehabilitation facility
      1. See above sections for short and long term holding
   vii. Release plan
      1. Will be developed when release criteria have been met or are close to being achieved.

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Khanna, Sukriti

From: Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca>
Sent: August-30-18 8:54 AM
To: Cottrell, Paul
Subject: FW: MEHDS Preliminary Results - J50, F18AUG18
Attachments: MEHDS Preliminary Report 3 - F18AUG18 August 2018.pdf

From: Brett Smith [mailto
Sent: Wednesday, August 29, 2018 3:16 PM
To: Raverty, Stephen AGRI:EX;
Cc: 'Tracey Goldstein'
Subject: RE: MEHDS Preliminary Results - J50, F18AUG18

Dear All,

Please find attached the preliminary microbiology results for the fecal samples F18AUG18-1, F18AUG18-1 NOAA, F18AUG18-2.

Thank you,

Brett Smith

---------- Forwarded message ----------
From: **Tracey Goldstein** <
Date: Thu, Aug 23, 2018 at 5:13 PM
Subject: MEHDS Preliminary Results - J50, F18AUG18
To: Stephen Raverty <Stephen.Raverty@gov.bc.ca>
Cc: "Joseph K. Gaydos" , Brad Hanson - NOAA Federal <,
Kristin Wilkinson , Hendrik Nollens <

Dear All,

Please find attached preliminary microbiology results for the fecal samples F18AUG18-1, F18AUG18-1 NOAA, F18AUG18-2 - will send more results when we have them.

Also attached are preliminary Brucella PCR results for J50 - a pcr product of around the expected size but also non-specific bands were amplified. We will sequence to confirm in Brucella is present.

Best, Tracey

On Wed, Aug 22, 2018 at 12:38 PM Tracey Goldstein < wrote:

> Dear All,
>
> Please find attached final bacterial culture results for the sample from J50. Final fungal culture results are pending and take 4 weeks to be completed.
>
> Best, Tracey

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On Mon, Aug 20, 2018 at 10:57 AM, Tracey Goldstein <[redacted]> wrote:
Dear All,

Please find attached updated microbiology results for the sample from J50 -final results are still pending. Please note *Photobacterium damselae* has been renamed and was previously known as *Vibrio damselae and Pasteurella damselae.*

Best, Tracey

Photobacterium damselae subsp. *piscicida* (formerly *Pasteurella piscicida*)

On Fri, Aug 17, 2018 at 6:53 PM, Tracey Goldstein <[redacted]> wrote:
Dear All,

Please find attached updated microbiology results for the sample from J50 - will send final results next week.

Best, Tracey

On Thu, Aug 16, 2018 at 8:31 PM, Tracey Goldstein [redacted] wrote:
Dear All,

Please find attached preliminary microbiology results for the sample from J50 - will send additional results when we have them.

Best, Tracey

On Wed, Aug 15, 2018 at 7:58 PM, Tracey Goldstein <[redacted] wrote:
Hi All,

Please find attached the parasitology report for J-50. The fungal and bacterial cultures have been started.

We will run Brucella PCR on the swab sample next week.

Best, Tracey

On Wed, Aug 15, 2018 at 3:03 PM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

Tracey

The fungal culture and aerobic culture would be the priority, and if there is sufficient feces the dfa may be of interest, but not necessary. If you are able to run pcr for Brucella, that would be of particular value (A73 had titers over 150,000). Will know for the future to submit more volume of feces for you.

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Sorry and thank you.

Step

From: [redacted] [mailto:[redacted] **On Behalf Of** Tracey Goldstein
Sent: Wednesday, August 15, 2018 2:12 PM
To: Joseph Karl Gaydos
Cc: Raverty, Stephen AGRI:EX; Hendrik Nollens

Subject: Re: J50 4 year old kw fecal submission to arrive tomorrow, Aug 15, 2018

Hi All,

The sample is only 300ul so we can't do everything you are asking with that volume.

We are starting with bacterial culture and fecal panel, maybe can do a smear to look for parasites by light microscopy but not enough for a fecal float, can try to do DFA for Giardia and Crypto if there is enough and if any left over they can try fungal culture.

If you have more sample to ship that would be good.

Best, Tracey

On Wed, Aug 15, 2018 at 1:41 PM, Tracey Goldstein <[redacted] wrote:

Samples arrived safely, T

On Tue, Aug 14, 2018 at 3:43 PM, Joseph Karl Gaydos [redacted] wrote:

Thank you Steve and than you Tracey.

Please bill to me and tell Lori it should be billed agains the NOAA KW Stranding Contract.

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Best,

JOE

Joseph K. Gaydos
360-376-3910
[redacted]
www.seadocsociety.org

On Aug 14, 2018, at 11:37 AM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

Hi Tracey,

Would you please run aerobic and anaerobic culture, the extended enteric fecal culture, fungal culture and id (in case there are yeast), and parasitology (floatation and sedimentation). IF there are protozoa detected by parasitology, we could potentially request pcr for cryptosporidium and giardia, but will away the parasit results.

Thank you

Stephen

From: [redacted] [mailto [redacted] **On Behalf Of** Tracey Goldstein
Sent: Tuesday, August 14, 2018 11:27 AM
To: Raverty, Stephen AGRI:EX
Cc: Nollens, Hendrik; Joseph K. Gaydos; Kristin Wilkinson - NOAA Federal
Subject: Re: J50 4 year old kw fecal submission to arrive tomorrow, Aug 15, 2018

Thanks Stephen.

So to be clear we are submitting the sample for aerobic and anaerobic bacterial culture, and for fecal float for parasite ID?

Thankst Tracey

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On Tue, Aug 14, 2018 at 9:40 AM, Raverty, Stephen AGRI:EX <Stephen.Raverty@gov.bc.ca> wrote:

Tracey

An emaciated 4 year old female kw J50 in the Salish Sea that has been closely monitored for the last couple of weeks and a 20 ml fecal sample was opportunistically recovered when the mom, brother and J50 swam near a research boat Sunday evening. A subsample of the feces believed to be from 1 of the 3 animals will couriered to your lab from SeaWorld today and should arrive tomorrow morning (genetics is currently underway to confirm the animal id).

Could you please screen the sample for enteric bacterial pathogens, fungal culture, and parasitology. If indicated, pcr for select pathogens may be considered, but could you please let Hendrik, Joe and I know.

As always, thank you for your help in working up these challenging cases. ☺

Stephen

--
Tracey Goldstein, PhD
One Health Institute
School of Veterinary Medicine
University of California
Davis, CA 95616
Phone: (530) 752-0412
Fax: (530) 752-3318
E-mail: [redacted]

--
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ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616-8734

29 August 2018

UC Davis Marine Ecosystem Health Diagnostic & Surveillance Laboratory

Client: Dr. Joe Gaydos, SeaDoc Society, UC Davis Wildlife Health Center

Viral Family/Genus PCR results:

Animal ID	Age	Sex	Species	Sample Date	Sample type	Pan - Brucella
F18AUG18-1	U	U	Orcinus orca	08/18/18	Feces	Negative
F18AUG18-1 NOAA	U	U	Orcinus orca	08/18/18	Feces	Negative
F18AUG18-2	U	U	Orcinus orca	08/18/18	Feces	Negative

Comment:
Amplifiable DNA was obtained from all of the samples for analysis. A PCR product of the expected size was not amplified in any of the feces samples using the Pan-Brucella assays.

Brucella testing was performed by PCR targeting a 150bp fragment of the gene encoding the insertion sequence IS711 (Wu et al. 2014).

The presence of a fragment of the ferritin gene was tested for to control for the PCR amplificability of the DNA in all samples.

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Preliminary Bacterial and Fungal culture Results 3 for F18AUG18-1 (this report supercedes all previous results):

Veterinary Medical Teaching Hospital
University of California, Davis

29Aug18 at 11:53am.

Microbiology 18M07202 Preliminary Report

Patient#:	**Client#:** X0MHL1
Tag#: X0mhl1 (F18aug18-1)	**Client:** VM Whc Marine Ecohealth Lab
Breed: OSA-KILLER WHALE	**Address:** Tracy Goldstein Research
Sex: U	**City, St:** Davis, CA 95616
Color:	**Home Phone:** [redacted]
Birth:	**Other Phone:** 530 752 3318FAX
Request#: 18M07202	**Visit#:** 516264M
Requested: 22Aug18	**Clinician:** No Doctor #
Comment: REC'D IN MICRO 8/22/18	**Tech:**
	Location:

Procedures Requested:

8019	Sea otter fecal protocol
8081	Fungal Culture And Identification
8011	Diagnostic bacteriology, aerobic, marine
8012	Diagnostic bacteriology, anaerobic, marine

Specimen #1	
Specimen	FECES
Collection Method	OTHER
Comment	SPECIMEN F18AUG18-1 in 50 ml conical.
Organisms	NO SALMONELLA SP. CULTURED. NO STREPT. BOVIS/EQUINUS COMPLEX CULTURED. VIBRIO PARAHEMOLYTICUS CULTURED from ENRICHMENT BROTH (ID'd by MALDI-TOF). NO CAMPYLOBACTER SP. CULTURED. ANAEROBIC CULTURE: VERY SMALL NUMBERS CLOSTRIDIUM SP. (CLOSTRIDIUM SORDELLII by MALDI TOF) NO CLOSTRIDIUM DIFFICILE CULTURED.

Specimen #2	
Specimen	FECES
Collection Method	OTHER
Comment	SPECIMEN F18AUG18-1 in 50 ml conical.
Organisms	Organisms continued: LARGE NUMBERS PHOTOBACTERIUM DAMSELAE (ID'd by MALDI-TOF), SMALL NUMBERS E. COLI (ID'd by MALDI-TOF). FUNGAL CULTURE NEGATIVE TO DATE.

Comment:
Vibrio parahemolticus has been cultured from enrichment broth. Very small numbers of clostridium have been cultured. Large numbers of Photobacterium damselae and small numbers of E. coli have been cultured from the sample from F18AUG18-1 to date, additional results are pending.

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Preliminary Bacterial culture Results 3 for F18AUG18-1 NOAA (this report supercedes all previous results):

Veterinary Medical Teaching Hospital
University of California, Davis

29Aug18 at 11:51am

Microbiology 18M07203 Preliminary Report

Patient#: **Tag#:** X0mhl1(F18aug18-1 Noaa) **Breed:** OSA-KILLER WHALE **Sex:** U **Color:** **Birth:**	**Client#:** X0MHL1 **Client:** VM Whc Marine Ecohealth Lab **Address:** Tracy Goldstein Research **City, St:** Davis, CA 95616 **Home Phone:** [redacted] **Other Phone:** 530 752 3318FAX
Request#: 18M07203 **Requested:** 22Aug18 **Comment:** REC'D IN MICRO 8/22/18	**Visit#:** 516264M **Clinician:** No Doctor # **Tech:** **Location:**

Procedures Requested:

8039	Fungal Identification
8081	Fungal Culture And Identification
8011	Diagnostic bacteriology, aerobic, marine
8012	Diagnostic bacteriology, anaerobic, marine

Specimen #1	
Specimen	FECES
Collection Method	OTHER
Comment	F18aug18-1 NOAA in 50ml conical.
Organisms	NO SALMONELLA SP. CULTURED. NO STREPT. BOVIS/EQUINUS COMPLEX CULTURED. NO VIBRIO SP. CULTURED. NO CAMPYLOBACTER SP. CULTURED. ANAEROBIC CULTURE: VERY SMALL NUMBERS CLOSTRIDIUM SP. (CLOSTRIDIUM SORDELLII by MALDI TOF). NO CLOSTRIDIUM DIFFICILE CULTURED.
Specimen #2	
Specimen	FECES
Collection Method	OTHER
Comment	F18aug18-1 NOAA in 50ml conical.
Organisms	Organisms continued: MODERATE NUMBERS PHOTOBACTERIUM DAMSELAE (ID'D by MALDI-TOF), SMALL NUMBERS EDWARDSIELLA TARDA (ID'd by MALDI-TOF). FUNGAL CULTURE NEGATIVE TO DATE.

Comment:
Very small numbers of Clostridium sp. have been cultured. Moderate numbers of Photobacterium damselae and small numbers of Edwardsiella tarda have been cultured from the sample from F18AUG18-1 NOAA to date, additional results are pending.

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Preliminary Bacterial culture Results 3 for F18AUG18-2 (this report supercedes all previous results):

Veterinary Medical Teaching Hospital
University of California, Davis

25Aug18 at 11:49am.

Microbiology 18M07204 Preliminary Report

Patient#: **Tag#:** X0mhl1 (F18aug18-2) **Breed:** OSA-KILLER WHALE **Sex:** U **Color:** **Birth:**	**Client#:** X0MHL1 **Client:** VM Whc Marine Ecohealth Lab **Address:** Tracy Goldstein Research **City, St:** Davis, CA 95616 **Home Phone:** [redacted] **Other Phone:** 530 752 3318FAX
Request#: 18M07204 **Requested:** 22Aug18 **Comment:** REC'D IN MICRO 8/22/18	**Visit#:** 516264M **Clinician:** No Doctor # **Tech:** **Location:**

Procedures Requested:

8019	Sea otter fecal protocol
8081	Fungal Culture And Identification
8011	Diagnostic bacteriology, aerobic, marine
8012	Diagnostic bacteriology, anaerobic, marine

Specimen #1	
Specimen	FECES
Collection Method	OTHER
Comment	F18AUG18-2 in 50ml conical tube.
Organisms	NO SALMONELLA SP. CULTURED. NO STREPT. BOVIS/EQUINUS COMPLEX CULTURED. NO VIBRIO SP. CULTURED. NO CAMPYLOBACTER SP. CULTURED. ANAEROBIC CULTURE: VERY SMALL NUMBERS CLOSTRIDIUM SP. (CLOSTRIDIUM SORDELLII by MALDI TOF). NO CLOSTRIDIUM DIFFICILE CULTURED.

Specimen #2	
Specimen	FECES
Collection Method	OTHER
Comment	F18AUG18-2 in 50ml conical tube.
Organisms	Organisms continued: LARGE NUMBERS PHOTOBACTERIUM DAMSELAE (ID'D by MALDI-TOF), VERY SMALL NUMBERS EDWARDSIELLA TARDA (ID'd by MALDI-TOF). FUNGAL CULTURE NEGATIVE TO DATE.

Comment:
Very small numbers of Clostridium sp. have been cultured. Moderate numbers of Photobacterium damselae and small numbers of Edwardsiella tarda have been cultured from the sample from F18AUG18-2 to date, additional results are pending.

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Khanna, Sukriti

From: Thornton, Sheila
Sent: August-30-18 8:05 PM
To: Lowe, Carmel; Kennedy, Eddy; MacConnachie, Sean; Cottrell, Paul; Brad Hanson; John Durban - NOAA Federal [redacted]
Cc: Kristin Wilkinson - NOAA Federal; Joe Gaydos; Marty Haulena; Nollens, Hendrik [redacted]
Subject: J50 sighted off Carmanah @ 1930 on Thursday, Aug 30th

Hello all – J50 has been sighted 1.5 mi south of Carmanah @ 1930 this evening. Conditions are flat calm, no ground swell, no fog. Entire J pod was present. J16 (mom) and J26 (brother) lag behind the group by 3 nm; J50 is lagging behind them by 0.5nm. J26 observed to drop back to within 0.2 nm after a kill and release prey (identified by bird presence and scale collection); J50 targeted the location and stopped in the fluke print. At times she may be as close as 0.2 nm behind J16 and J26, but appears to be having difficulty in keeping up.

Ks were sighted foraging down the US side of JDF, Ls were foraging off Walbran.

Regards,

Sheila

Sheila J. Thornton, Ph.D
Research Scientist, Ecosystem Sciences Division (ESD), Science Branch
Fisheries and Oceans Canada / Government of Canada
Sheila.Thornton@dfo-mpo.gc.ca / Tel: 604-364-5917

Scientifique de recherches, Division des sciences de l'écosystème, Sciences
Pêches et Océans Canada / Gouvernement du Canada
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Khanna, Sukriti

From: Kristin Wilkinson - NOAA Federal <[redacted]>
Sent: August-30-18 5:41 PM
To: Katy Foster; Brad Hanson (NOAA Federal); Holly Fearnbach; [redacted] John Durban - NOAA Federal; Teri Rowles; Lynne Barre - NOAA Federal; Marty Haulena; Deborah Giles; Michael Milstein - NOAA Federal; Scott Rumsey - NOAA Federal; Mark Strom - NOAA Federal; Ruth Howell; Mike Ford; Jim Milbury - NOAA Federal; Barry Thom - NOAA Federal; Thornton, Sheila; Chris Yates - NOAA Federal; Forbes Darby - NOAA Federal; Kate Naughten; John Ewald - NOAA Federal; Becker, Penny A (DFW); Cottrell, Paul; Teresa Mongillo; Amilee Wilson - NOAA Federal; Jennifer Ise - NOAA Federal; Emma Htun - NOAA Federal; Samantha Guidon - NOAA Federal; Katherine Brogan - NOAA Affiliate; Jennie Lyons; Deborah Fauquier; jeff foster; Sarah Mesnick; Director Marine Mammal; Kevin Werner - NOAA Federal; Joseph Karl Gaydos; [redacted] Jim McBain; Kimball, Taylor P (DFW); Sarah Wilkin - NOAA Federal; James Hackett - NOAA Federal; Penny Swanson - NOAA Federal; Rick Goetz - NOAA Federal; Barry Berejikian; Rebecca Ferro; [redacted]
Subject: Daily Debrief - Thursday, August 30, 2018

Hi All -

There were no sightings of J pod today. There are no updates at this time.

Kristin

On Wed, Aug 29, 2018 at 7:43 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:
Hello Everyone -

There were no sightings of J pod and no on water activities today.

Kristin

On Tue, Aug 28, 2018 at 7:12 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:
Hello All -

It was another day (day 10) of J pod being out of the San Juan area. We will continue to have a team on standby by through September 4th to provide medical treatment to J50. Several teams of killer whale researchers will be in the area after that timeframe and we will reassess our on water needs after Labor Day.

Kristin

On Mon, Aug 27, 2018 at 4:58 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:
I apologize for the incorrect date in the header in the previous email. The below update is for Monday, August 27th.

Hello All -

We continue to have no sightings of J pod in the inland waters of Washington so there are no updates for today. We continue to have a team on standby through Wednesday of this week to provide medical treatment to J50 if we have the opportunity to do so. In the meantime, I have been contingency planning so we are prepared for any scenario that may occur.

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Kristin

On Mon, Aug 27, 2018 at 4:56 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:
Hello All -

We continue to have no sightings of J pod in the inland waters of Washington so there are no updates for today. We continue to have a team on standby through Wednesday of this week to provide medical treatment to J50 if we have the opportunity to do so. In the meantime, I have been contingency planning so we are prepared for any scenario that may occur.

Kristin

On Sun, Aug 26, 2018 at 6:12 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:
Good Evening All -

There were no sightings of J pod today and there are no updates at this time.

Kristin

On Sat, Aug 25, 2018 at 5:12 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:
Good Evening All -

There were no sightings of J pod today and there are no updates at this time.

Kristin

On Fri, Aug 24, 2018 at 4:21 PM, Kristin Wilkinson - NOAA Federal <[redacted]>wrote:
Hi Everyone -

J50 was seen today by the Pacific Whale Watch Association (PWWA) on the Canadian side. She was reported to be with the J16s and keeping up with them. They were headed inbound for a period of time but have now turned around and are headed west out by the Jordan River. We have requested photographs of J50 from the PWWA to get a visual on her overall condition.

Our team is eager to see J50 and to provide her with a second dose of Covenia and give her a dewormer, one dose of Ivermectin will do the job.

I'll continue to provide daily updates. Have a wonderful weekend everyone!

Kristin

On Thu, Aug 23, 2018 at 5:48 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Hello All -

There are no updates from the field response team on J50 for today.

Kristin

On Wed, Aug 22, 2018 at 6:12 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:
Hi Everyone -

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

There was a sighting of J50 by DFO on the evening of Tuesday, August 21st. A superpod (J, K and L) was seen off Carmanah heading towards Nitinat in British Columbia. J50 was reported to be seen with her mom, J16. She was reported to be energetic but still exhibiting the "odd wander off/slightly disoriented behavior" as they have noted in the past. They also saw J16 successfully foraging and J50 came over by her side immediately after the kill. Thank you to DFO for sharing this information with the NWFSC.

There was no on-water response by the team today. Poor conditions with heavy wildfire haze and smoke continue to limit sightings on both sides of the border.

All for now,

Kristin

On Tue, Aug 21, 2018 at 5:32 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:
Hi Everyone -

It was another day with no sightings of J pod so there are no updates at this time.

Kristin

On Mon, Aug 20, 2018 at 5:44 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Hello All -

There were no sightings of the Residents today so we have no updates at this moment in time.

We continue to have a response team on standby.

Kristin

On Sun, Aug 19, 2018 at 1:33 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Hello All,

J pod was sighted this morning off of Sooke, British Columbia. The pod is heading west at high speed so our response team is standing down for the day.

There is no debrief call with the response team this evening.

I hope everyone has a nice Sunday,

Kristin

On Sat, Aug 18, 2018 at 10:22 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:
Hi Everyone,

We did deploy an on-water team today since J pod was sighted early this morning off Sooke, British Columbia. The Sea Doc Society volunteered their vessel for operations through the next week since the NWFSC vessel is off island undergoing repairs.

Behavior: The team spent 3 hours with J50 and her condition was no worse than previously noted but may be a bit better than seen recently. J50 was quite social and traveling and in close contact with her pod. At one point when most animals moved to a higher speed to come across the Straight of Juan de Fuca she kept at her same pace and fell behind but later rejoined her pod. At the end of the day UW observed J16, J50 and her brother

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foraging at Hannah Heights. Center for Whale Research also noted foraging behavior and we will reach out to see if they would be willing to share that information with us.

Samples: UW collected two large fecal samples from the J16's. One sample was quite gelatinous that was light in coloration and contained blood. This type of sample is seen from time and time and it will be sent in for analysis.

Veterinary care: A visual health assessment was performed today by Dr. Joe Gaydos with the SeaDoc Society. We wanted to reassess her condition after not seeing her all week. The plan for Sunday is to have both Dr. Gaydos and Dr. Haulena on board to provide a second dose of Covenia (antibiotic) and if given the opportunity a dose of Ivermectin (dewormer). Getting a dart into a fast moving animal that surfaces quickly and from a moving vessel is very challenging. If the current needle/dart combination bounces off the surface of J50 the veterinarians will use at their discretion a "collared needle" which will help ensure the entire dose of medication is delivered to her. The needle and dart may temporarily stay in J50 for a period of time but the vet team believes this has little risk to her.

All for now,

Kristin

On Fri, Aug 17, 2018 at 6:25 PM, Kristin Wilkinson - NOAA Federal < [redacted] > wrote:
Hello All -

No sightings of J50 today and no on-water activities took place.

Have a great weekend everyone,

Kristin

On Thu, Aug 16, 2018 at 5:10 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Hello All -

No on-water activities took place today with no additional sightings of J50 so we have no updates for today. We continue to have our team of biologists and veterinarians on standby to respond if and when she comes back into the inland waters.

Thanks,

Kristin

On Wed, Aug 15, 2018 at 6:13 PM, Kristin Wilkinson - NOAA Federal < [redacted] > wrote:
Hi Everyone -

Latest Sighting: DFO reported seeing J pod on the evening of August 14th heading westbound near Nitinat, British Columbia with J50 lagging behind ~ 200 yards and L's seen of Swiftsure Bank this morning, August 15th.

Operations for Thursday: Our response team is back on the water with a smaller crew and working from a new vessel, the SeaDoc Molly B. Opportunistic sampling will occur with a focus on observing and photographing predation events. Drone coordination is still pending.

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Veterinary priorities: A large fecal sample was collected from J50's pod over the weekend. One initial result came in which showed high levels of *Contracaecum* (nematode parasite) so giving a dose of dewormer would be ideal if given the opportunity to do so. Vet Priorities for Treatment:
1. Covenia - Antibiotic
2. Ivermectin - Dewormer

Fish Trials are on pause until the NWFSC team deploys back into the field in a week or two.

That's all for now,

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

On Sun, Aug 12, 2018 at 10:16 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Hello All -

J50 was encountered off of Cattle Point and was seen socializing and holding a steady pace today.

Fecal Sample: A large fecal sample was collected from the NWFSC today from J50's immediate pod. It may be from J16 (mom), J42 (brother), or J50 but it will be sent in for analysis on Monday or Tuesday at the very latest. Dr. Stephen Raverty and Dr. Hendrik Nollens worked on a revised fecal sampling protocol for the team with a tiered approach with diagnostics being the priority.

Fish Trials: The first live fish trial was conducted today with J50 in the immediate area. The Lummi Enforcement vessel (fish deployment), the King Co. Sound Guardian (support vessel), WDFW Enforcement (drone platform), and NWFSC (monitoring and lead on water coordinator) were all on scene. The boats were in the perfect positioning to introduce live Chinook (ranging from 3.5-5 lbs. to 15-20 lbs.) in front of the path of J50. The first attempt was made at 150 m and J50 took a long extended dive at that same moment. The closest the team got while releasing fish was 70 m and released two fish back to back. Some of the larger animals did show interest to fish #2 and #3 but none of them responded after the 4th was released. Drone footage was collected during the operation and the response team will review the footage and then we will have a group discussion about proceeding with a second trial. At this point in time the team believes no fish were consumed but reviewing the drone footage will help confirm that.

Monday Plans: NWFSC will be back out on the water and hopes to observe some predation events and collect fish scales from those events if given the opportunity to do so.

Vet Plans: We are currently ordering more antibiotics and they will be available early this week. If the whales stay around we will have a vet come to administer the second dose of antibiotics.

All for now,

--

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On Sat, Aug 11, 2018 at 10:27 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
I forgot to mention the below item;

Fish Trial: There was some discussion to trying a live fish trial tomorrow if resources are available to do so. 12 fish have been made available by the WDFW Marblemount Hatchery.

Kristin

On Sat, Aug 11, 2018 at 10:14 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Hello Everyone -

NWFSC and UW were on the water today with J50.

Sample collection: UW was able to collect a small fecal sample from J50's immediate pod today but cannot say with certainty that it is from J50. The sample is too small for the analysis (cytology, microbiology, parasitology, etc.) we would need to do to be performed. The sample will be frozen and sent to Sam Wasser's lab at UW for analysis but it will not be used for J50's case. NWFSC did not collect any samples today (breath, fecal, etc.).

Behavior: When UW was on scene J50 was keeping up with her pod members in a tight flanked directional travel and then later observed in a modified resting state. NWFSC was later on scene with her for 5 hours and noted J50 quickly fell behind in a very strong tidal current and remained stationary in the strong current for ~ 1hr. The tide changed and she began to pick up speed but she did not porpoise along with the other animals and when NWFSC left the scene she was 1km behind the pod.

Foraging: There was a report from a charter company of J50 catching a fish today, the response team is following up for more information. NWFSC did not see evidence of J50 feeding during their time with her even while in prime foraging habitat.

New goals: Dr. Stephen Raverty will be leading an effort to write and prepare a fecal sampling protocol for the on water teams. We will also be working to identify additional sources for UAS capacity for the next week.

J35: Center for Whale Research said that J35 was seen today without her calf.

All for now,

Kristin

On Fri, Aug 10, 2018 at 10:33 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Good Evening All -

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It was another day on the water for the response team which started with a sighting of killer whales off the west side early in the day which turned out to be transients.

The Lummi Enforcement vessel and the Sound Guardian were deployed to be ready to release live Chinook salmon in the path of J50 if given the opportunity to do so. Since J pod was not in the area the NWFSC, The Whale Sanctuary and the Lummi Tribe rafted together and decided to do a test run of releasing live fish which was deemed beneficial to work through all of the handling and logistics. 10 fish were released alive through the chute and only 1 fish was lost in the transport process. There were significant challenges that faced the team in regards to media and our Communications Team is aware of these concerns and has addressed them.

J50 was located by the response team around 2:30 in Active Pass in Canada and did collect two prey samples from her immediate pod. No fecal or breath samples were collected today. They noted that J50 was energetic and she was keeping up with her pod members. She was observed separated from her pod for 2+ hours.

The veterinarian team had a call earlier in the day to discuss the veterinary health assessment that was performed yesterday. The team felt the live fish trials were still important since we are not sure what is the underlying cause of the emaciation and certain drugs can only be delivered by oral methods (i..e praziquantel for tapeworms, anti-fungal medications). The live fish trials may also be diagnostic if she can eat the offered fish (i.e. would rule out an ingestion or inappetance issues).

Our goals remain the same moving forward:
Assessment:
1. Continue visual documentation of feeding, ingestion and defecation over the weekend. Including capturing photographs and video (preferably from the tower) or using UAS especially during feeding events.
2. Collect fecal to assess pathogens, parasites, etc.
Treatment:
1. Make plans to deliver a second dose of Covenia and a dose of Ivermectin or Moxidectin via dart sometime next week (Tues-Thurs time frame)

J35 was also encountered and was reported to be solid and in robust body condition. It was unclear if she was still carrying the deceased calf but there was something (not sure what) being held in her mouth.

Thank you to the on-water team and to everyone for all of their efforts.

Good night,

Kristin

On Thu, Aug 9, 2018 at 11:08 PM, Kristin Wilkinson - NOAA Federal <[redacted]> wrote:
Hello All -

It was a very full day filled with several successes towards accomplishing our priorities. These activities were conducted in U.S. waters (although the team did start out in Canada today).

Here is what we achieved:
1. 6 hours on the water with J50
2. A comprehensive veterinary assessment of J50 by Dr. Marty Haulena with the Vancouver Aquarium
3. Breath sample collection
4. Antibiotic injection
5. Collection of fish scales from predation event by her immediate pod
6. Photo, video, and UAS documentation of J50 and the response efforts

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J50 was reported to be very active and while she was by herself (not unusual for her behavior) when she was first encountered she joined up with her pod quickly and stayed with them for the remainder of the day. She could keep up with her pod easily, took deep dives, and was not struggling to get to the surface. The team did not see her eat but others in her group were actively feeding and prey sharing was noted. They did note of her small size and how remarkable her emaciation was.

Future goals if we get to spend more time with J50:
1. Collection of a fecal sample
2. Additional observations of her behavior, condition, and predation events
3. Live fish trials may begin as early as Friday

Future goals if we observe J35:
1. Documentation of her behavior, overall condition, and pod dynamic

Other goals:
1. Schedule a veterinary call to discuss the health assessment
2. Send the breath sample to Seattle for analysis
3. Improve on-water communications between the response vessels and coordination staff

A HUGE congratulations to the response team - I am very proud of what they were able to accomplish today. A thank you to the Communications and External Affairs team as well for all of their excellent coverage of our activities and goals.

All for now,

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

On Tue, Aug 7, 2018 at 5:47 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Hello All -

J50 was sighted alive today by DFO off of Port Renfrew. Sheila Thornton will be providing images to the team later today. No on water actions were taken by the response team today.

Our evening call with the debrief team has been cancelled since Sarah Wilkin and I spent the day in Friday Harbor meeting with the core response team. We met for 4.5 hours at Friday Harbor Labs and discussed possible scenarios, near term objectives, and scheduling. The team also identified additional sample collection that would be ideal to have but they will remain secondary to breath, fecal, the veterinary health assessment and antibiotic administration goals.

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Once those goals are accomplished we will be working on providing temporary nutritional support therapy to J50. This action is authorized and all of the needed resources are available and in place for deployment.

If we do deploy the response team and encounter J50 we will be working with WDFW Enforcement and Soundwatch to maintain a 500 yard perimeter.

That's all for now,

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted]Cell

On Mon, Aug 6, 2018 at 9:53 PM, Kristin Wilkinson - NOAA Federal <[redacted] wrote:
Good Evening -

It was another day without whales in the inland waters so our response team did not do any photography, sample collection, or perform a health assessment. K and L pod were sighted at Swiftsure Bank by DFO, no sign of J pod.

We were successful at staging all of the needed veterinary supplies at Friday Harbor Labs so they are readily available for the future. Dr. Hendrik Nollens from Sea World flew from San Diego to Friday Harbor today and is poised to conduct a health assessment on J50 and provide an injection of antibiotics to her if given the opportunity tomorrow. Sarah Wilkin, our National Stranding Coordinator also flew to Seattle and Sarah and I will be traveling to the San Juans early tomorrow morning to meet with the core team to discuss logistics and operations for the coming week. We will be on the island coordinating with the team on Tuesday and Wednesday.

The Whale Sanctuary Project and the Lummi Tribe in coordination with NWFSC did a test run today to work through the logistics of the transport of fish. Two vessels were utilized, the King Co. DNR & Parks Sound Guardian and the Lummi Tribe Enforcement vessel. There was a blessing of the fleet and the test run went smoothly with no significant challenges noted. This project is still pending authorization but will be available on Tuesday if given the approval to proceed.

WDFW Enforcement will be doing dedicated Southern Resident Killer Whale patrols over the next 7 days. Our response team will be working in coordination with Enforcement if their assistance is needed for perimeter control or support.

The Communications Team shared the below resources with the team earlier today:
http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/killer_whale/updates-j50-j35.html
Linked from the homepage under What's New: http://www.westcoast.fisheries.noaa.gov/index.html
Linked from J50 news story: http://www.westcoast.fisheries.noaa.gov/stories/2018/08032018_srkw_j50.html
Short url: http://bit.ly/NOAAJ50J35
There is also an email address that the public can use to email us their input and ideas, Killerwhale.help@noaa.gov

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All for now, thanks everyone -

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
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[redacted] Cell

On Mon, Aug 6, 2018 at 1:57 PM, Kristin Wilkinson - NOAA Federal <[redacted] wrote:
Hello All -

The evening debrief calls are going to focus on operations with the core field response team. After the nightly call, I will be providing email updates to all of you with what we accomplished that day and what our next day plans are. Thank you for being flexible and understanding as we get our operations and field teams staffed and organized.

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

On Sun, Aug 5, 2018 at 10:14 PM, Kristin Wilkinson - NOAA Federal <[redacted] wrote:
Hi Everyone -

Thank you to those of you who were able to join us tonight for the Sunday debrief call. I apologize that I had to ask some of you to sign off since we were at capacity and some of the field response team was unable to sign in.

DFO reported seeing L's and K's west of Port Renfrew but J pod was not sighted today. Heavy fog has been present which has limited sightings of the whales.

We do have some updates on prioritization of field response activities;
1. Sample Collection - breath and fecal

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2. Health Assessment & Injection of a long lasting antibiotic via pole syringe if possible, if not, remote delivery via Dan Inject. Dr. Marty Haulena and Dr. Jim McBain are on standby for Monday and Dr. Hendrik Nollens on Tuesday. The antibiotic treatment would not be available until Tuesday.
3. Providing temporary nutritional support therapy to J50 in coordination with The Whale Sanctuary Project, the Lummi Tribe and NWFSC. The Lummi Tribe will be doing a dry run on Monday and will be ready to transport live fish on Tuesday. They would have ~ 12 fish per day. John Gussman will provide UAS services to document the process and whale behavior. Discussions will continue on oral medication treatment.

Communications provided an update from their team about the website, public input, social media (1 post per day), partner engagement, and the daily press call at 10am.

I'll be hosting our consultation team call tomorrow morning from 9:30-11 and will likely head up to the San Juans on Monday night or early Tuesday morning to meet with the team in person.

All for now,

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

On Sat, Aug 4, 2018 at 10:13 PM, Kristin Wilkinson - NOAA Federal [redacted] wrote:
Good Evening Everyone -

Thank you to those of you who were able to join us tonight for the Saturday debrief call.

While J50 was not sighted today we can confirm that J pod is headed inland and was last sighted eastbound near Jordan River and Sooke around 7pm. They will likely come into the San Juan area tonight so we are very hopeful we will accomplish on Sunday the below goals;

1. Fecal sample collection from J50 - Deborah Giles, University of Washington
2. Breath sample collection from J50 - Hanson, NWFSC
3. Sample collection of skin if needed, areas of discoloration have been noted - Giles or Hanson
4. Veterinary medical assessment on J50 - Haulena, Vancouver Aquarium (Dr. Haulena will be on Brad Hanson's vessel)
5. Additional imagery and video of J50 by UAS - Durban and Fernbach, SWFSC and SR3 Images of the flukes and overall skin appearance is of interest to the veterinarians as well as respiration rate.
6. After the veterinary health assessment is complete a veterinarian call will be hosted by NOAA Fisheries - timing to be determined. This will be a small group of veterinarians to discuss the best treatment for J50's condition.

The NOAA Communications and External Affairs team provided a very valuable overview of their plans to communicate with the public and with the media. I'll let Ruth and Forbes outline their plan in a separate email. Any media inquires can be directed to the Communications Team, [redacted] or via cell at [redacted] Michael did reach out to the news directors in the Seattle area requesting they be mindful of the on-water activities so we can make the most of our time with J50 and the other SRKW's.

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Many of you have asked for permission to view the Google Drive, here is a direct link and I will also follow up with an invite. We have all agreed that images will not be shared outside of the group. https://drive.google.com/drive/folders/1Gg5Whty6QvPFPYJEUps2PtvTXgRDT5eq?usp=sharing

We will plan to talk again tomorrow night, Sunday, August 5th at 9pm. Please call into 503-326-7672.

A huge thank you to everyone involved!

--
Kristin Wilkinson
NOAA Fisheries, Protected Resources Division
West Coast Region, Based in Seattle
Regional Stranding Coordinator, Washington & Oregon
206-526-4747 Office
[redacted] Cell

s.16(2)

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Khanna, Sukriti

From: Harber, Lee
Sent: August-30-18 9:18 AM
To: Brekke, Heather; Gallant, Nicole; MacConnachie, Sean; Eros, Carole; Moore, Kendra; Johansen, Jeff; Spence, Brenda; Cottrell, Paul; Nener, Jennifer; Cauffope, Genevieve; Galbraith, Ryan; Ho, Agatha; Hayes, Trish; Chmelnitsky, Elly; Malikian, Janine; Silverstein, Adam; Smith, Ken; Jones, Lisa Ann
Cc: Thomson, Andrew; Davis, Neil; Webb, Cheryl
Subject: RE: Weekly SRKW OPS Committee

Hi folks,

For this morning's meeting the agenda will be as follows:

Standing items:

- J35 & J50 updates (Paul)
- RKW amended recovery strategy - consultations (Lisa)
- Emergency Protection Order (Lisa)
- SRKW IMAG (Lee)
- OPP linkages / TMX decision (Ken)
- Communications (Janine)
- Roundtable

Lee Harber
Marine Mammal Advisor
Fisheries and Oceans Canada
401 Burrard St. Vancouver, B.C.
(604) 666-1164 or BB: [redacted]

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Fisheries and Oceans Canada | Fiche d'acheminement de correspondance
Correspondence Routing Slip | Pêches et Océans Canada

UNCLASSIFIED
GCCMS # : 2018-505-00063
EKME # : 3939256

To: / Pour: Rebecca Reid Date: JUL 2 7 2018

Object: / Objet: **REGIONAL APPROVAL OF THE PROPOSED AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE**

From / De: Cheryl Webb, Regional Director, Ecosystems Management Branch JUL 2 5 2018

Additional Approvals:
Autre(s) approbation(s):

☐	Material for the Minister / Documents pour le Ministre	☒	Your Signature / Votre signature	☐	Information

Screen: / Filtre: The Department has assessed this issue in full.

- ☒ It contains no reference to matters covered by the screen relating to J.D. Irving Limited.
- ☐ It contains matters referenced in the screen relating to J.D. Irving Limited, but in our view does not engage the screen.
- ☐ In our view, the screen relating to J.D. Irving Limited should be engaged.

Remarks: / Remarques: This briefing note was developed in consultation with the following regions/sectors:

Neil Davis, Director, Resource Management JUL 2 3 2018

Carmel Lowe, Regional Director, Science JUL 2 4 2018

Andrew Thomson, Regional Director, Fisheries Management JUL 2 5 2018

I approve, but have 2 questions for Brigid or Karen just about the BN.

tx RC.

: LISA JONES (604-666-2792) / Cheryl Webb / ck

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Fisheries and Oceans Canada | Pêches et Océans Canada

Ecosystems Management | Direction des écosystèmes

Regional Director | Directeur régionale

UNCLASSIFIED
2018-505-00063
EKME # 3939256

MEMORANDUM FOR THE REGIONAL DIRECTOR GENERAL, PACIFIC

REGIONAL APPROVAL OF THE PROPOSED AMENDED RECOVERY STRATEGY FOR THE NORTHERN AND SOUTHERN RESIDENT KILLER WHALE
(FOR DECISION)

SUMMARY OF ADVICE TO THE REGIONAL DIRECTOR GENERAL

The purpose of this note is to seek your approval to submit, jointly with the Parks Canada Agency, the proposed *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada* for consideration to publish it for a 60-day national public comment period on the Species at Risk Public Registry.

The proposed Amended Recovery Strategy (aRS) incorporates two additional areas of special importance to be identified as critical habitat (CH): the waters off southwestern Vancouver Island and waters of west Dixon Entrance. The document also provides clarification of the functions, features, and attributes for both current and additional CH.

The Pacific region conducted a 30-day online external review on the draft aRS from June 12 – July 11, 2018. Based on feedback received, a minor change was incorporated.

Interest in the proposed aRS is anticipated to be very high due to the finding that Southern Resident Killer Whales face imminent threats to their survival and recovery, concerns raised that the expedited consultation timeline does not allow for meaningful consultation, and concern that the designated CH would result in further fishing closures.

Your approval is sought by **July 26, 2018** so the proposed document can be posted for a 60-day national online public comment period by August 20, 2018.

BACKGROUND

Northern and Southern Resident Killer Whales (NRKW and SRKW) are listed on Schedule I of the Species at Risk Act (SARA) as Threatened and Endangered, respectively. The Minister of Fisheries and Oceans and the Minister responsible for the Parks Canada Agency (PCA) are the competent ministers under SARA for this species.

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Canada

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s.21(1)(b)

The *Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada* was finalized in 2008 and identified two areas of partial critical habitat (CH), which was legally protected by SARA Critical Habitat Order (CHO) in 2009. A schedule of studies was included in the 2008 Recovery Strategy to further identify CH areas. In 2011, minor amendments were made to clarify the attributes of the CH section.

In the current proposed aRS (Attachment 1), the CH section (Section 7) was updated to identify two additional areas as proposed CH, as identified in a recent science advice report (CSAS SAR 2017/011): 1) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (important for both NRKW and SRKW); and 2) waters of west Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit (important for NRKW). Further, it provides additional clarification of the functions, features, and attributes for both new and existing CH. This identification of CH adheres to the *Guidelines for the Identification of Critical Habitat for Aquatic Species at Risk* (2015).

Under SARA, recovery strategies must be developed in cooperation and consultation with potentially affected groups and individuals. Species at Risk (SAR) policy direction is to address this requirement via a 30-day regional external review, which for this document occurred from June 12 to July 11, 2018. During this time, teleconference meetings were held with Indigenous groups, local and regional government representatives, and stakeholders to clarify the process and implications of CH identification and protection. All feedback from this regional external review was considered but did not result in substantive changes to the document (Attachment 2). One minor change was made to clarify the description of the attribute for acoustic environment in Table 4 (p. 63).

The next step is to send the document for Ministerial approval for posting as a Proposed aRS for a 60-day national public comment period on the SAR Public Registry. This comment period is expected to start August 20, 2018.

STRATEGIC CONSIDERATIONS

Ecojustice filed a petition to the Minister of Fisheries and Oceans and the Minister of Environment and Climate Change Canada on January 30, 2018 seeking immediate action for an emergency protection order (EPO) for SRKW under s.80 of SARA to address the key threats and included a request to designate additional CH. The area identified in the petition is the same as that proposed CH off southwest Vancouver Island described in the aRS.

On May 24, 2018, the Ministers issued a news release stating that the SRKW is facing imminent threat to their survival and recovery. Subsequently, the Ministers must recommend Cabinet make an EPO for SRKW, which may include identification of CH. However, this recommendation is not required if the Ministers are of the opinion equivalent measures under other Acts of Parliament are in place. An assessment of equivalent measures is underway.

The timeline for posting the Final aRS on the SAR Public Registry is by December 2018. [redacted]

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s.21(1)(b)
s.23

The timeline for the aRS has been communicated to Ecojustice, insofar as to say the 60-day national public comment period is anticipated to start in late August.

Recreational fishers expressed significant concern regarding the timelines for review coinciding with their fishing season as well as concern that creation of new areas of CH will lead to further fisheries restrictions. These concerns have prompted attention from the media, the Premier of BC, and local elected officials. There have been ongoing and repeated demands to extend the external review and push back the start of the 60-day comment period to later in the fall.

While the designation of new areas of critical habitat does not expressly prohibit or restrict human activities, it does require regulatory authorities to prevent the destruction of the critical habitat. Fishing Activity is identified in the aRS as a threat to the critical habitat

The area off the South West Coast of Vancouver Island encompasses large portions of the Maa-Nulth Treaty domestic fishing area, and contains significant recreational and commercial fishing areas.

Further, some opinions were expressed that there is insufficient science to support the new proposed CH areas, most notably for La Pérouse Bank. However, the science advice (CSAS SAR 2017/011) describes that there is extensive data to support the importance of Swiftsure Bank and western Dixon Entrance to RKW. While there are fewer data to support La Pérouse, both populations are known to use the area, including over winter, and the area is known to be a highly productive salmon habitat where foraging events have been documented for both populations.

SCIENCE ADVICE

In 2017, a Canadian Science Advisory Secretariat (CSAS) Science Advisory Report was published that identified two additional areas of special importance for RKW and provides a description of the functions, features, and attributes of the proposed additions to RKW CH and examples of human activities likely to destroy CH (CSAS SAR 2017/011).

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INTERDEPARTMENTAL CONSULTATIONS

The proposed aRS was developed cooperatively with the PCA, with input sought from Environment and Climate Change Canada, the Department of National Defence (DND), Transport Canada, the Department of Natural Resources, the province of BC, and U.S. National Oceanic and Atmospheric Administration and Washington Department of Fish and Wildlife. Favourable input was received from DND. The province of BC provided a response letter after the review period closed expressing support of CH identification but require a socio-economic analysis and full consultation in order to support it for legal habitat protection.

INDIGENOUS CONSULTATIONS

Input was sought from coastal Indigenous groups (122) and and four Wildlife Management Boards (Maa-nulth, Tla'amin, Tsawwassen, and Nisga'a Wildlife Management Board / Nisga'a Lisims Government). The concerns were primarily expressing concern over perceived implications to Treaty Fishing Rights, potential implications to fishing activities, and that further meaningful consultation is required.

EXTERNAL CONSULTATIONS

E-mails were sent to stakeholders (211) and other government agencies (19), and information circulated to advisory boards. Approximately 690 responses were received, the majority of which were from the recreational fishing sector, and local and regional government representatives, including the Premier of BC, expressing concerns over timelines for consultation, implication of future management measures, and science advice used to identify CH. Pacific region is working with the Sport Fishing Advisory Board to support their participation in the next phase of consultation on the proposed amendments. Vancouver Fraser Port Authority and the Chamber of Shipping both expressed support, but requested clarification of CH thresholds and values. Ecojustice expressed concern over the timeline and the approach used to identify CH.

.../5

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ADVICE AND RECOMMENDATIONS TO REGIONAL DIRECTOR GENERAL, PACIFIC

It is recommended that the proposed *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada* be approved for submission to National Headquarters for consideration to publish it on the SAR Public Registry for a 60-day online national public comment period.

B Payne Brigid Payne For:

Cheryl Webb
Regional Director
Ecosystems Management Branch

☑ I concur with the recommendations

☐ I do not concur with the recommendations

Rebecca Reid
Regional Director General
Pacific Region

Attachment(s): (2)

1) Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada [PROPOSED]
2) Consultation Summary: External Review of the Draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales* (Orcinus orca) *in Canada*

Pages 4165 to / à 4258

are duplicates of

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pages 455 to / à 548

Pages 4259 to / à 4260
are duplicates of
sont des duplicatas des
pages 453 to / à 454

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Fisheries and Oceans Canada
Correspondence Routing Slip

Fiche d'acheminement de correspondance
Pêches et Océans Canada

UNCLASSIFIED
GCCMS #: 2018-009-00423
EKME #: 3942478

To: / Pour: Jonathan Wilkinson

Date:

Object: / Objet: **MEETING WITH THE SPORT FISHING INSTITUTE IN THE WEEK OF JULY 30, 2018**

From / De: Andrew Thomson, Regional Director, Fisheries Management JUL 30 2018

Via: Rebecca Reid, Regional Director General, Pacific Region JUL 30 2018

Additional approvals:
Autre(s) approbation(s):

☐	Material for the Minister Documents pour le Ministre	☐	Your Signature Votre signature	X	Information

Screen: / Filtre:

The Department has assessed this issue in full.

- ☐ It contains no reference to matters covered by the screen relating to J.D. Irving Limited.
- ☐ It contains matters referenced in the screen relating to J.D. Irving Limited, but in our view does not engage the screen.
- ☐ In our view, the screen relating to J.D. Irving Limited should be engaged.

Remarks: / Remarques: This briefing note was developed in consultation with the following regions/sectors:

Distribution:

Drafting Officer/ Rédacteur: CAROLE EROS (604) 666-3271 / Neil Davis / sk

(for)
Email approval attached
JUL 27 2018

004261

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Fisheries and Oceans Canada / Pêches et Océans Canada

JUL 30 2018

Rebecca Reid, RDG, Pacific

Docket #: 2018-009-00423
Security Classification: UNCLASSIFIED

SCENARIO NOTE

MEETING WITH THE SPORT FISHING INSTITUTE (SFI) THE WEEK OF JULY 30, 2018

Overview

The executives of the Sport Fishing Institute (SFI) of British Columbia (BC) are meeting with you to convey the economic significance of their sector and current challenges.

BC's recreational fishing sector is a major contributor to the economy. On an annual basis over 300,000 licenses are purchased for fishing in tidal waters, and the sector produces $936 million in annual sales, paying $150 million in wages and benefits, and creating over 8,400 jobs. The SFI represents the sport fishing industry and those benefiting from the activity. It is expected that the key issues that will be raised during the meeting are: the need for implementing a revised vision for BC's recreational sector, concerns regarding the timing and level of recent consultative processes on Resident Killer Whale Critical Habitat and the MPA Network, and concerns regarding delays in long standing, proposed regulation changes.

1. Timing and level of recent engagement

An external review of the draft *Amended Recovery Strategy for the Northern and Southern Resident Killer Whales in Canada*, which includes proposed new identified critical habitat areas as well as clarifications to existing critical habitat, was held from June 12 – July 11, 2018. The document will be posted on the Species at Risk public registry for a 60-day online national comment period, anticipated to start August 20, 2018. The regional review process prompted extensive negative reaction from the recreational sector, who raised concerns that the timeline is taking place when recreational fisheries have entered their busiest time of year, a time of year when anglers are widely dispersed and unavailable. They have expressed similar concerns with the timing of the upcoming 60 day process and have urged the Department to consider delaying the start of the process to the fall. They have also requested that the engagement include community meetings in key affected areas rather internet only.

Minister's Objectives

Your objective is to listen to the SFI's' concerns and confirm that the 60 day process will be internet-based and encourage them to submit their sector's input via that process. When specific management measures are being considered, the Department will discuss engagement options.

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Key Messages

- **I recognize that the timing coincided with a busy time of year for your sector. The imminent threat of extinction faced by Southern Resident Killer Whales led to the decision to not delay the external review process.**

- **There will be additional opportunity to provide input on the proposed Amended Recovery Strategy when it is posted to the Species at Risk Registry for a 60-day online public comment period, anticipated to begin in late August 2018. You will receive a pre-notification email identifying the general time frame for the comment period and how to provide feedback.**

2. Updating the vision for BC's recreational fishery sector

The SFI and SFAB continue to express concern that there is insufficient funding to properly manage the recreational fishery and to meet the mutually agreed to *Vision for Recreational Fisheries in British Columbia*. The sector is increasingly feeling their concerns are undervalued by the Department. .

On May 25, 2018, DFO staff facilitated a joint planning session to update the vision by reviewing trends in the sector, and highlighting key opportunities to further develop its economic and social potential. The SFI will seek your continued support and commitment to a comprehensively supported recreational fisheries management program.

Minister's Objectives

Your objective is to confirm the importance of the recreational fishery to BC, and DFO's commitment to work with the SFI to develop strategies to extract maximum value from the sector.

Key Messages

- **It is important that the recreational fishing sector has a plan and strategy to grow its economic and social contributions to Canada. A revised vision document will be one step to achieving this objective. I look forward to reading the revised document.**

3. Regulatory Amendments

The SFI may want to highlight the need to advance outstanding regulation change requests, particularly changing the wording on tidal licenses from catch must be recorded in "ink" to make it clear that records must be "permanent"). This change has broad implications and, once affected, would present opportunities to enhance catch monitoring activities, support compliance

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and enforcement work, and to aid in the ongoing issue regarding another regulation change request for transport and packaging of fish. These amendment requests are currently with Legislative and Regulatory Affairs (LRA). An additional request for a number of minor revisions to the recreational regulations is under development but will require consultations with the sector in the Fall. Progress to date has been delayed due to higher priorities (Bill C-68, SARA listings, critical habitat orders and Oceans Act MPAs), but LRA has dedicated resources to the proposals and has assured that they will move forward.

Minister's Objectives

Your objective is to acknowledge their frustration while confirming that the change requests are in process.

Key Messages

- **I can appreciate your frustrations with legislative delays. The regulatory agenda is very full, but Pacific Region amendment requests have been flagged for action and are advancing through the process. Staff will keep you updated on progress.**

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